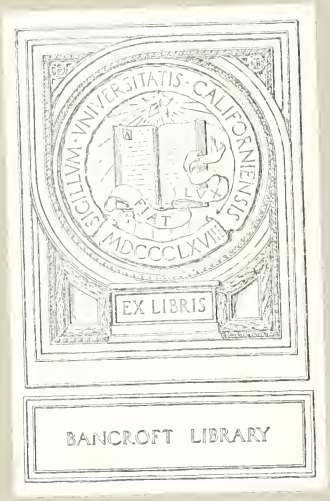
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Volume 6. CALIFORNIA JANUARY. Number 1.

AGRICULTURIST AND LIVE STOCK JOURNAL

Subscription Price, $1.50 a year. SAN JOSE, CALIFORNIA, JANUARY, 1875. Single Copies, 15 cents.

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Singer Sewing Machines.

Rooms, No. 334 Santa Clara st., San Jose.

A. C. PERKINS,

Agent for Santa Clara County.

The **Singer Sewing Machine Company** sold, in 1873, 232,444 Machines, and 113,254 MORE THAN ANY OTHER SEWING MACHINE COMPANY.

☞ We have a First-class Machinist employed, and make the repairing of all sorts of Sewing Machines a specialty. Old machines taken in exchange for new. All work warranted.

BERKSHIRE PIGS FOR SALE.

DON'T RAISE SUCH LOOKING HOGS as this when you can get Pure-bred Berkshires to improve your common stock.

We have now Three Pairs of as fine-bred Berkshire Pigs, three months old, as can be found in America, which will be sold to those first ordering, if taken this month, at **$40** a pair.

Pedigrees furnished with full guarantee of purity Address,

S. HARRIS HERRING,

Editor CALIFORNIA AGRICULTURIST and LIVE STOCK JOURNAL, San Jose.

SEEDS. SEEDS.

OF EVERY VARIETY.

Fresh and reliable, such as experience and care only can select.

Grass and Clover Seeds, Kentucky Blue GRASS, HUNGARIAN, ORCHARD, ITALIAN RYE, RED TOP, TIMOTHY, MESQUIT, SWEET VERNAL, CHOICE CALIFORNIA ALFALFA, WHITE CLOVER, RED CLOVER, etc.

ALSO, HAMIE, JUTE and TOBACCO seeds; together with a fine and complete collection of TREE seeds, AUSTRALIAN BLUE GUM, SEQUOIA GIGANTEA, PINUS INSIGNIS, etc

For sale, wholesale and retail, by

E. F. WELLINGTON,

Importer and Dealer.

425 Washington street, San Francisco.

FLOWER SEEDS. Vegetable SEEDS.

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CALIFORNIA

GLOVE FACTORY,

SAN JOSE.

WILCOX & WILLIAMS,

Manufacturers and dealers in

GLOVES AND GAUNTLETS

Of all descriptions.

Heavy Buck Gloves for Teamsters' and Farmers' Use, Heavy and Light Gauntlets for Ladies and Gentlemen, Heavy and Light Buckskin Gloves for Gentlemen, and the Most Stylish Sorts of Fine Kid Gloves for Ladies.

☞ The very best materials are used in our Factory, and skilled workmanship is guaranteed.

Store and Factory: 339 First street, under the New Odd Fellows' Hall.

The American Sardine Co's Boneless Sardines, are much better, and less than half the cost of imported Sardines. apr lyr.

A BOON

To All Who Require Light for Household and Other Purposes.

The Recent production of "Mineral Sperm," together with the peerless Dual Burners for all kinds of lamps, is one of the most important events of the times.

Mineral Sperm Oil is as safe as sperm or lard oil, has no offensive smell, and finer illuminating power than any oil yet produced.

YOU CANNOT EXPLODE IT.

If the lamp should fall and break, the oil would extinguish all flame. One gallon goes as far as two of the best coal oil.

The Burners fit any lamp. Call and see them, at L. H. HOLLOWAY'S, where you will find a complete assortment of Lamps and Lamp Fixtures, and also the completest assortment of Groceries and Provisions, at prices which defy competition.

C. A. HOUCH,

Successor to L. H. HOLLOWAY, who will conduct the business on the same liberal principles and terms as heretofore.

311 Santa Clara Street,

San Jose Bank Building.

BREEDERS' DIRECTORY.

Parties desiring to purchase Live Stock will find in this Directory the names of some of the most reliable Breeders.

OUR RATES.—Cards of two lines or less will be inserted in this Directory at the rate of 50 cents per month. A line will average about eight words. Payable annually.

CATTLE.

COLEMAN YOUNGER, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle.

R. G. SNEATH, Menlo Park, San Mateo Co., Cal., choice Jersey Cows, Heifers and Bull Calves for sale

CARR & CHAPMAN, Gabilan, Monterey county, Cal., breeders of Trotting Horses, Short-Horn Cattle and Swine.

R. R. CANNON, Suisun, Solano county, California, breeder of Short-Horn Cattle and Swine.

JOS. L. CHAMBERS, St Johns, Colusa county, Cal., breeder of Short-Horn Cattle.

CHARLES CLARK, Milpitas, Santa Clara county, Cal., breeder of Short-Horn Cattle and Swine.

C. COMSTOCK, Sacramento, California, breeder of Short-Horn Cattle.

J. BREWSTER, Galt Station, Sacramento county, Cal., breeder of Short-Horn Cattle.

WM. FLEMING, Napa, California, breeder of Short-Horn Cattle,

C. B. POLHEMUS, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle,

W. L. OVERHISER, Stockton, San Joaquin Co., Cal., breeder of Short-Horn Cattle and Swine.

WM. QUINN, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle.

J. B. REDMOND, Black Point, Marin county, Cal., breeder of Short-Horn Cattle.

GEO. R. VERNON, Oakland, Alameda county, Cal., breeder of Short-Horn Cattle.

MOSES WICK, Oroville, Butte county, California, breeder of Short-Horn Cattle.

CYRUS JONES & CO., San Jose, Santa Clara county, Cal., breeders of Short-Horn Cattle.

S. B. EMERSON, Mountain View, Santa Clara county, Cal., breeder of Short-Horn and Holstein Cattle and Cotswold Sheep.

J. R. ROSE, Lakeville, Sonoma county, California, breeder of Devon Cattle.

G. D. MORSE, San Francisco, Breeder of Short-Horn and Devon Cattle.

L. J. HANCHETT, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle.

J. R. JEWELL, Petaluma, Sonoma county, Cal. breeder of Short-Horn Cattle.

SENECA DANIELS, Lakeville, Sonoma county, Cal., breeder of Devon Cattle.

CHAS. G. BOCKIUS, Lomo Place, Sutter county, Cal., breeder of Short-Horn Cattle.

JOHN JUDSON, Bloomfield, Sonoma county, Cal., breeder of Short-Horn Cattle.

A. MILLARD, San Rafael, Marin county, California, breeder of Jerseys and Alderneys.

H. P. LIVERMORE, San Francisco, breeder of Short-Horn Cattle.

BENNETT & PAGE, San Francisco, breeders of Short-Horn Cattle.

LEWIS PIERCE, Suisun, Solano county, California, breeder of Short-Horn Cattle.

S. N. PUTNAM, breeder of Pure-bred Durham Cattle, Santa Clara, Cal.

SWINE.

S. HARRIS HARRING, San Jose, Cal., breeder of Best Purebred Berkshire Swine.

CHARLES CLARK, Milpitas, Santa Clara county, Cal., breeder of purebred Berkshire Swine,

MEAT MARKETS.

I. EDDY & BRO., Stall No. 1, City Market, do a general butchering and market business. City orders delivered free of extra charge.

SHEEP AND GOATS.

MRS. ROBERT BLACOW, Centerville, near Niles Station, Alameda county, Cal. Pure-blooded French Merino Rams and Ewes for sale.

A. G. STONESIFER, Hill's Ferry, Stanislaus Co., Cal., breeder of Pure-blooded French Merino Sheep.

A. VROMAN, Jenny Lind, Calaveras county, Cal., Cotswold Bucks for sale. References, Moody & Farish, San Francisco; Shippee, McKee & Co., Stockton.

MARSH & RETICKER, San Jose, Santa Clara county, breeders of Pure Angora Goats.

LENDRUM & ROGERS, Watsonville, Cal., importers and breeders of Pure Angora Goats.

LENDRUM & ROGERS, Watsonville, Cal. Importers and breeders of the finest Cotswold Sheep and Angora Goats.

McCRACKEN & LEWIS, San Jose, Cal. Importers and breeders of fine Angora Goats. Also, fine Cotswold graded bucks for sale.

MERINO RAMS.—Pure blood and Grades. The finest in the State. Address, McCracken & Lewis, San Jose.

THOS. BUTTERFIELD & SON,
BREEDERS AND IMPORTERS OF
ANGORA OR CASHMERE GOATS,
☞ Also, Cotswold and other long wool Sheep. ☜
FRENCH AND SPANISH MERINOS.
HOLLISTER, MONTEREY CO., CAL.

POULTRY.

M. FALLON, Seventh and Oak streets, Oakland, Cal., offers for sale Eggs from every variety of choice Fowls.

ALBERT E. BURBANK, 43 and 44 California Market, San Francisco, importer and breeder of Fancy Fowls, Pigeons, Rabbits, etc.

MISCELLANEOUS.

DAWSON & BANCROFT, U. S. Live Stock Exchange, southeast corner 64 Fifth and Bryant streets San Francisco. All kinds of common and thoroughbred Stock always on exhibition and for sale.

BARRY & WALLACE, 386 First street, Handsome turnouts always on hand at fair prices. Fine hearse for funerals. Give us a trial.

J. H. GORDON, 351 Santa Clara street, below Second. Gas, water and steam fitting, and general plumbing business. Charges very moderate.

B. SANGUINETTI, 418 and 420 First st. Bookcases, wardrobes, kitchen safes and picture frames made to order. Furniture made and repaired.

W. WARNER HENRY, Jobber of groceries and provisions, No. 421 Clay street, near Sansome. Orders from the country promptly attended to.

J. BOSCHKEN, Hardware, Builders' Materials, House Furnishing Utensils, and all kinds of Shelf Hardware, 417 First Street, San Jose.

R. S. THOMPSON,
NAPA, CAL.

IMPORTER AND BREEDER OF
THOROUGH-BRED
BERKSHIRE SWINE.

E. A. CLARK,
Attorney at Law,
Real Estate, and General Business Agent.
SEARCHING AND CONVEYANCING promptly and correctly done—Real Estate bought and sold. OFFICE:—In Post Office Building.

LOUIS CHOPARD,

WATCHMAKER,

JEWELLER,
And dealer in
SILVERWARE,
SPECTACLES AND CUTLERY,
At Low Figures.
☞ Watches and Jewelry carefully repaired.

AMMONIA!
—FOR—
WASHING
—AND—
Cleansing Purposes.

THIS ARTICLE IS UNIVERSALLY USED in Europe, and although only recently introduced for general family use in San Francisco and neighborhood, is already in great demand. It is now the intention of the manufacturers to introduce it all over the Pacific Coast. With this idea they offer it at prices which bring it within the reach of every household. It is unequaled for cleansing

Woolen Fabrics,
Cutlery,
Carpets or Crockery,
Scrubbing Floors,
Washing Paint,
Removing Grease Spots,
Shampooning or Bathing.

It renders water soft, and imparts a delightful sense of coolness after washing.

PRICE—Per Pint Bottle, 25 cents; per Quart Bottle, 40 cents; per Half Gallon, 75 cents.

The trade supplied with all grades of AMMONIA at San Francisco prices.

D. McKENZIE,
no 3t San Jose Foundry, Sole Agent.

Milton Campbell.
—DEALER IN—
STOVES,
PUMPS,
IRON PIPES,
TIN ROOFING,
ETC., ETC.
385 FIRST ST., near Central Market.
SAN JOSE.

SANTA CLARA TANNERY.
JACOB EBERHARDT, PROPRIETOR,
ALL KINDS OF LEATHER, SHEEP SKINS, AND WOOL. Highest price paid for Sheep Skins, Tallow, Wool, etc.

JACKSON LEWIS.
DEALER IN

Watches

and Jewelry, Silver and
PLATED WARE,
259 Santa Clara st., San Jose.
AGENT FOR THE DIAMOND SPECTACLES.

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The California Agriculturist
AND
LIVE STOCK JOURNAL.

VOL. 6. SAN JOSE, CALIFORNIA, JANUARY, 1875. No. 1.

Wire in Dried Apples.

EDS. AGRICULTURIST:—Consignments of Alden dried fruits have lately been received by our grocers, which are highly approved of by the house-keepers of San Diego. There is, however, one drawback to the dried apples, and I wish to know if it is an accidental one, incident to the quantity shipped here, or whether it is a usual defect in the preserving process. I find minute pieces of wire about the thickness of medium cotton thread, and from an inch to half an inch in length, imbedded in the slices, necessitating the overhauling of every single piece preparatory to cooking. I think it about as safe to swallow a needle or a pin as one of these slight but tough pieces of wire. A busy housekeeper who has little time to spare grudges the bestowal of so much of it upon a mess of apple-sauce. MRS. J. P. ROWE,
San Diego.

We think that the pieces of wire spoken of by our correspondent must have come there by the scaling off of particles of the wire meshes upon which the fruit rested while drying, owing to the action of the heat of the furnace and acids of the fruit upon imperfect wires. We never before heard of such a thing.

BATTLE MOUNTAIN, Nev.,
December 20th, 1874.

ED. AGRICULTURIST. *Dear Sir:*—Please forward me your valuable paper; enclosed please find price of same. Will you have the kindness to inform me if hogs will do well on raw artichokes, or what general information you may have in relation to feeding and fattening hogs on same. Also, if they will do well, where I can obtain ¼ ton and at what price. Yours Resp'y,
H. C. EMMONS.

We have seen hogs fatten on the ground artichoke on Spoon River, Illinois. The hogs run in the pastures where they were growing, and rooted them up as they wanted them. We do not know where the roots can be obtained nor at what price. Will some reader who has cultivated them here answer and give their experience.

Best Advertising Mediums.

The Agricultural Journals find their subscribers mainly among the best class of the country population. They necessarily employ a good deal of various and special talent, and expend on themselves a larger amount of money than other journals, and must therefore obtain a larger circulation to live and thrive. Thus they form a highly important and influential class of newspapers, and have a peculiar value to advertisers. Perhaps no others are read so carefully and thoroughly, and so much preserved for re-reading and reference.—*Advertisers' Magazine.*

THE mind advances by steps: some men take one, some two, some three.

The San Jose Society for the Prevention of Cruelty to Animals, has just issued from our office, 1,000 Constitutions and By-laws and the Act under which the Society was incorporated. It is a 16-page pamphlet, pocket size with a colored cover, and is published for *gratuitous* distribution. Persons wishing to organize such a society, or feeling an interest in this one should send for a copy. Every humane person must approve of its objects.

Lottery Advertisements.—We have just received two grand schemes for swindling the unweary, and been offered great inducements to advertise the same. We wish there was a simple, plain law against advertising such abominations. No decent paper will do it to be sure. It should be reason enough why a paper should not be patronized by respectable persons when, for money, they will encourage so shameful a vice as the lottery business.

Mr. J. J. H. Gregory of Marblehead, Mass., has his annual advertisement in our columns. He was the original introducer of some of the best vegetables now found on every table. He comes this season with a new squash, and a number of tempting specialties, some of which are finely illustrated from engravings taken from photographs. The fact that so many of his varieties of seed are of his own growing, is a golden fact for farmers and gardeners.

The California State Grange has never authorized or given official recognition to any paper in this State as an organ of the Grange movement. Whatever has been published has been done as private speculation by individuals, at their own discretion. The idea has prevailed that certain papers are Grange organs, and should be respected as such. Patrons should not allow themselves to be humbugged.

Sugar Beets for Stock.

In a paper before the Little Falls, N. Y., Farmers' Club, Harris Lewis said: "I have concluded that the best varieties of the French and German sugar beets are the most nutritious, the most acceptable to the cow, and produce the best flavored milk of all the roots I ever fed. But all these sugar beets go down to the crown in the soil, and cost three or four times as much labor per ton to harvest them as it does to harvest any one of the kinds of beets known as the mangold wurzel. Again, the sugar beets seldom yield more than 20 tons per acre, while the mangold wurzel often yields over 40 tons per acre. I would recommend the large wurzel, such as the Norbiton giant, long mammoth, red, yellow ovid and yellow globe, for general cultivation, as those kinds that will give the greatest yield per acre, and as cattle food, give entire satisfaction to all dairymen or cattle feeders, who may grow and feed them in connection with hay, or other dry forage, during the winter. The more I feed beets to cows the greater value I place upon them, as good, nutritious, health-promoting food.

LOCAL MOVEMENTS IN BUSINESS.

A fine, large, new jewelry store has been opened at 324 Santa Clara street, San Jose, by L. Houriet & Co. It is ahead of anything in San Jose in the magnificence of its appointments and amount of stock.

Business is extending up First street quite rapidly. San Jose seems to be in a prospering condition—more so than for several years past, if we are to judge by the growth of business.

John Rock has opened his yard in San Jose for the sale of all sorts of fruit, ornamental and shade trees, plants and vines, etc., both out of door and green-house. Mr. Henn is his salesman again this season, and the stand is at the same place, near Wells, Fargo & Co's., First street.

Our old friend and partner, Mr. L. H. Holloway, has sold his grocery store to a gentleman named Huff, who takes possession the first of this month. Mr. Holloway goes to San Francisco to engage in the same business in connection with a publication to be devoted to the grocery trade, so we understand.

A new glove factory has opened attractively at 330 First street, under the new Odd Fellows' Hall. This is an enterprise that is bound to succeed, as already the demand for California made gloves has run out the cheap trash that is imported to make money on.

Reform Journals.—Says an exchange: "Journalism in the line of reform is very difficult business. Somebody has to make sacrifices, and generally the last ones who are willing to make them are those who are most to be benefitted by their being made." The reason why this is so seems to be this: the majority of men and women prefer amusement to instruction, and would sooner be flattered in their vices than to listen to reproof or make an effort at correction. It is more convenient to run in the ruts of social opinion than to stem the current in pursuit of something better. The majority of mankind dislike to reason or act out of the narrow circle of conventional ways and ideas.

The Santa Clara Valley Agricultural Society hold an annual meeting for the election of officers on the 7th of this month. An attempt will be made by those opposed to reform to perpetuate the horse racing, and pool selling, and liquor selling features, while those who would see the society conducted with the object of advancing the farmers' interests and not as a horse race, will oppose it. The life membership is $50, which is so high that but few farmers can afford to take memberships. This gives the jockeys, who can, for the "benefits" derived from their "avocations" afford to join, a chance for a majority.

California Agriculturist and Live Stock Journal.

S. HARRIS HERRING & CO.,
Editors and Publishers.

OFFICE: Over the San Jose Savings Bank, Baibach's Building, Santa Clara Street, near First, San Jose.

SPECIAL TERMS TO AGENTS.

RATES OF ADVERTISING.

Per one Column	$15 00	Per Month
" half Column	8 00	"
" fourth Column	4 00	"
" eighth Column	2 00	"
" sixteenth Column	1 00	"

☞ We are determined to adhere to to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

Stock Breeders will find it to their advantage to extend the circulation of this journal. The general farmer who reads its columns must become impressed with the importance of keeping more and better stock. Indeed, the fact that the most important part of a good farm is, or should be its live stock, is one that is worthy of being widely discussed. The very best agricultural writers express themselves in this way, and the very best farmers are the ones who best know how indispensable good stock is upon a farm that produces the maximum of profit.

The Reformer who expects to be appreciated for the efforts he or she may make in behalf of humanity in any direction, or in any cause, is entertaining a fallacious notion, and the sooner their mind is disabused of such dreamings the better. The only real success is in the *accomplishment of good*, and that should be the main thought—self should be least thought of. The reward of philanthropy is enjoyed by those on whom good deeds are bestowed. The giver must depend for his reward in a sublime faith that all must be well that results from well doing; very seldom does a reformer become popular with the masses, the great majority of them, hard working and poor, move through this world without the plaudits of mankind, and frequently more scorned than admired.

We have tried the Ammonia for Washing advertised by D. McKenzie. Wife says it saves one-third the labor and leaves the clothes beautifully white and clean. It dissolves the dirt, and little rubbing is required to cleanse the clothes.

The Grangers' Guide is a new publication of twenty-four pages, published by Bro. Earl, who is an officer of the Grangers' Immigrant Bureau. Although published under the auspices of the Grangers, it is really a private speculation, as much as any other paper. It may have a mission to fill, and it may fill it. The paper makes a very credible appearance, but gives a very glowing and one-sided account of the country. It is published ostensibly to induce immigration to this State, and to show immigrants where homes can be obtained at a reasonable cost. How much of self-interest is involved we are not able to say.

The man who undertakes to establish a manufactory for the production of any article on this coast has got to fight his way against importers and dealers generally. The starch factory that was started in our county some years since, was actually crushed by importing parties who held the monopoly of the trade, through dealers, and who had enriched themselves at the people's expense. The furniture manufactory in San Jose, is an object of special spite, and the importers will do the best they can to kill it. The furniture made at this factory is better than has ever been sold for the same money in San Jose, and we hope that whoever wants such articles as they manufacture will patronise the home factory, in preference to being humbugged with imported goods.

Carl Brown.—San Jose can lay claim to an artist who promises to gain for himself considerable distinction. Mr. Carl Brown came here last Summer at the call of Mr. Brohaskie to paint new style scenery for his theater. The rapidity and excellence with which he brought out new scenery was the astonishment and delight of all theater-goers, and did much to make the "Opera House" popular. Lately Mr. Brown has been painting portraits, which have gained him much credit. He has also painted a battle scene which exhibits a large conception of the ideal. Having settled here, and being of an enterprising disposition, he has, in addition to the use of his pallet, opened a skating rink on the Opera House floor, where the active youth of San Jose can devote some of their surplus vitality to physical development.

The California Agriculturist is *not* moved to San Francisco. It is still published at San Jose, and will most probably continue to be for some time to come. We have had no notion of moving. Although we claim as our field the whole broad land of the Pacific States, yet we are content to call San Jose our home. When it was announced that Mr. G. W. Henning's paper, which he calls the *Granger*, was going to be moved to San Francisco, many persons, owing to similarity in the sound of names, took us for the *Granger* man, and *vice versa*. There has been a good deal of "confusion worse confounded," first and last, since we unfortunately associated his name with ours for two months in 1873. It will be recollected that the *California Granger* was started soon after that short partnership was abruptly ended. When we would not be roped into receiving bribe money for advocating the interest of a political party, and could not be persuaded to give up, at his own terms, our interest in the AGRICULTURIST, which we established, the threat that the AGRICULTURIST should be killed was freely made. We had always objected to making, or attempting to make, the AGRICULTURIST an *organ* of any society or party. We preferred to be free and untrammelled; to discuss any matters in the interests of the farmers with but one motive—the farmers' good. Without authority from the Grangers, but as a catch-word, the name *Granger* was given to Henning's paper. While Henning was in the AGRICULTURIST he put at the head of this journal, contrary to our expostulations, claiming that he had the authority and the right so to do, these words: "The AGRICULTURIST having been recognized as the only organ of the Patrons of Husbandry on the Pacific Coast, we respectfully solicit the aid of the officers of Granges in making it a perfect exponent of the principles and working of the Order," etc. On complaint of the proprietors of the *Rural Press* to the Executive Committee of the State Grange, the Committee wrote to "Herring & Henning," ordering us to take down that announcement as it was made without authority, etc. And they further declared that they desired to recognize no paper as an organ, but trusted to the good will of the whole intelligent press to favorably discuss and advocate the Grange interests. Thi sentiment suited us, and a modest person would naturally think it would have satisfied Mr. Henning. But the first thing he did when we dissolved partnership, was to start the *California Granger*. He might, with as much propriety, have called it the *Grangers' Confidence*. By taking up the popular cry, and assuming a name that would imply authority in Grange matters, our "would-be leader" led off. But now that he has departed from our town to San Francisco to take the wind out of the sails of our old rival the *Rural Press*, we surely ought to be satisfied. It is an ill wind that blows nobody good. We condole the *Rural Press* on their acquisition of such a rival. The *Rural Press* has always given a great deal of Grange intelligence and has been faithful and sound upon all questions concerning Patrons. Its advice has been reliable, and it is a good agricultural as well as Grange paper. We shall be sorry to see the *Rural* demolished although when it is out of the way, we may, by having one less agricultural paper on this coast to contend with, be able to gather a larger harvest of subscribers.

Christmas has passed off, as did Thanksgiving Day, quietly with us, but not the less as a holiday. It was joy enough to see the many happy faces and hear the laughing voices out-welling with kindness. Why cannot the world always be as cheerful? Alas! for the selfishness that takes from our lives so much of good will and joy that might come from well-doing. These holidays come like gleams of sunshine, and if the clouds they rend would only stay away during the whole year, our days would always be happy, and as good as "Christmas and New Year" all the time. Let us all remember that as long as there is a chance to improve it is our duty to progress.

Poetry.

To a Dandelion in January.

Did you make a mistake, my darling?
Did you hear the joy-bells ring,
Deep in the tangle of grasses,
Till you thought it was surely Spring?
And forth, in your winsome beauty,
You stepped with a modest air,
Matching the golden weather
With the grace of your golden hair.

It is not in the least surprising
That a sky so tender as this
Should waken the dreaming flowers
As if with an April kiss.
Indeed, the marvel is only
That all the beautiful train
Violet, snow-drop and lily,
Do not troop hither again.

If we, with our grown-up learning,
Were not so dreadfully wise,
We should certainly think that Summer
Was standing before our eyes;
For here are her glorious colors,
And here is her fervid sun.
Pray, how could you tell, little flower,
Her reign was over and done?

But what will you do when a morning
Shall come to your dwelling-place,
And scowl with a dark displeasure,
Into your laughing face?
Where will you hide in the morning
That shatters your house so fair,
And weaves a glitter of hoar-frost
Over your faded hair?

Not with the touch of April,
Not with the breath of May,
Cometh the chill old Winter,
Her weight on your heart to lay.
My poor little dandelion,
When you heard the joy-bells ring,
Why did you not wait and listen,
And be sure that it was Spring?

Up from the tiny flower
Came a voice as fine as a thread:
I tell you, in such an hour,
I couldn't lie still in bed;
And to see this Indian Summer,
And its light as clear as May,
Is worth whatever may happen
On your dread wintry day.

Courage to Do Right.

We may have courage, all of us,
To start at honor's call,
To meet a foe, protect a friend,
Or face a cannon ball;
To show the world one hero lives—
The foremost in the fight—
But do we always manifest
The courage to do right?

To answer, not with steady breath,
And quick, unfaltering tongue,
When hence temptation, ever near,
Her syren song has sung?
To care not for the hankering tone,
The jest or studied slight;
Content if we can only have
The courage to do right?

To step aside from fashion's course,
Or custom's favored plan,
To pluck an outcast from the street,
Or help a fellow man?
If not, then let us nobly try,
Henceforth, with all our might,
In every case to muster up
The courage to do right.

The Forest Trees.

BY ELIZA COOK.

Up with your heads, ye sylvan lords!
Wave proudly in the breeze;
For our cradle bands and coffin boards
Must come from the forest trees.

We bless ye for your Summer shade,
When our weak limbs fail and tire;
Our thanks are due for your Winter aid,
When we pile the bright log fire.

Oh! where would be our rule on the sea,
And the fame of the sailor band;
Were it not for the oak and cloud-crown'd pine
That spring on the quiet land?

When the ribs and masts of the good ship live
And weather the gale with ease;
Take his glass from the tar who will not give
A health to the forest trees.

Ye lend to Life its earliest joy,
And wait on its latest page—
In the circling loop for the rosy boy,
And the easy chair for Age.

The old man totters on his way,
With footsteps short and slow;
But without the stick for his help and stay,
Nor a yard' length could he go.

The hazel twig in the stripling's hand
Hath magic power to please;
And the trusty staff and slender wand
Are pluck'd from the forest trees.

Ye are seen in the shape of the blessed plow
And the merry ringing flail;
Ye shine in the dome of a monarch's home,
And the sacred altar-rail.

In the rustic porch, the panell'd wall,
In the gay triumphal car;
In the rude-built hut, or the banquet hall—
No matter, there ye are!

Then up with your heads, ye sylvan lords!
Wave proudly in the breeze;
Our cradle bands and coffin boards,
We're in debt to the forest trees.

Backbone.

When you see a fellow-mortal
Without head and fearless views,
Hanging on the skirts of others,
Walking in their cast-off shoes,
Bowing low to wealth and favor
With uncovered, abject head,
Ready to retract or waver,
Willing to be driven or led;
Walk yourself with firmer bearing,
Throw your mortal shoulders back,
Show your spine has nerve and marrow—
Just the things which he must lack.

When you see a theologian
Hugging close some ugly creed,
Fearing to reject or question
Dogmas which his priest may read,
Holding back a noble feeling,
Choking down each manly view,
Caring more for forms and symbols
Than to know the good and true;
Walk yourself with firmer bearing,
Throw your mortal shoulders back,
Show your spine has nerve and marrow—
Just the things which his must lack.

When you see a politician
Crawling through contracted holes,
Begging for some fat position
In the ring or at the polls,
With no sterling manhood in him,
Nothing staple, broad, or sound,
Destitute of pluck or ballast,
Double-sided all around;
Walk yourself with firmer bearing,
Throw your mortal shoulders back,
Show your spine has nerve and marrow—
Just the things which his must lack,
A stronger work
Was never heard
In sense and tone
Than this—BACKBONE.

A modest song and plainly told—
The text is worth a mine of gold,
For many men most sadly lack
A noble stiffne s in the back,
—[Sel.

What Are We Going to Do?

What are we going to do, good friends,
In the year that is to come,
To battle that fearful fiend of death
Whose messenger is rum?
Shall we fold our hands and bid him pass,
As he has passed before,
Leaving his deadly poisoned draught
At every unbarred door?

What are we going to do, good friends,
Still wait for crime and pain,
Then bind the bruises, and heal the wounds,
And sooth the free again?
Let the fiend still torture the weary wife,
Still poison the coming child,
Still break the suffering mother's heart,
Still drive the sister wild?

Still bring to the grave the gray-haired sire,
Still martyr the brave young soul,
Till the rivers of death, like a burning stream,
O'er the whole great nation roll;
And poverty take the place of wealth,
And sin and crime and shame
Drag down to the very depths of hell
The highest and proudest name?

Is this our mission on earth, good friends,
In the years that are to come?
If not, let us rouse and do the work
Against the spirit of rum.
There is not a soul so poor and weak,
In all this goodly land,
But against this evil a word may speak,
And lift a warning hand.

Then lift a warning hand, good friends,
With a cry for home and hearth,
Adding voice to voice, till the sound shall sweep,
Like the rush of death-knell, o'er the earth.
And the weak and wavering shall hear,
And the faint grow brave and strong,
And the true and good and great and wise
Join hands to right this wrong.

Don't Run in Debt.

Don't run in debt—never mind, never mind
If your clothes are all faded and torn;
Fix 'em up, make them do; it is better by far
Than to have the heart weary and worn.
Who will love you the more for the set of your hat,
Or your ruff, or the tie of your shoe;
The style of your boots or shade of cravat,
If they know you're in debt for the new?

Good friends, let me beg of you, don't run in debt,
If the chairs and the sofa are old;
They'll fit your backs better than any new set
Unless they are paid for—with gold.
If the house is too small draw the closer together,
Keep it warm with a hearty good will;
A big one, unpaid for, in all kinds of weather,
Will send to the warm heart a chill.

Don't run in debt—dear girls, take a hint,
If the fashions have changed since last season,
Old Nature is out in the very same tint—
And old Nature, methinks, has some reason;
But just say to your friends, I cannot afford
To spend time to keep up with fashion,
My purse is too light and honor too bright
To be tarnished with such silly passions.

Gents, don't run in debt—let your friends, if the want,
Have fine houses and clothing and flowers;
But, unless they are paid for, be more of a man
Than to envy their sunshiny hours,
If you've money to spare, I've nothing to say,
Spend your dollars and dimes as you please;
But, mind you, the man who his note has to pay
Is the man who is never at ease.

Kind husbands, don't run in debt any more,
'Twill fill your wife's cup full of sorrow,
To know that a neighbor may call at your door
With a bill you must settle to-morrow.
O, take my advice—it is good—it is true!
But, lest you may, some of you, doubt it,
I'll whisper a secret, now, seeing 'tis you—
I've tried it, and know all about it.

The chain of a debtor is heavy and cold,
Its links all corrosion and rust;
Gild it o'er as you will, it is never of gold;
Then spurn it aside with disgust—
"I've tried it, and know all about it."

Accomplished.

Softly fell the twilight shadow,
Over hill and vale and dell;
And the moon beams, soft and radiant,
Kissed the tree-tops as they fell:
While within a low-walled chamber
On a rude couch lay a child,
Pale and fragile as a lily,
With a sweet face, pure and mild.

On her brow was stamped the impress
Of the holy hand above,
And from out her eyes so lovely
Shone the light of heavenly love.
"Mother," and the pale lips parted
With a trembling, gasping moan—
"Mother, I die and leave you:
Die and leave you all alone.

"All alone, for father is not
Like the father I once knew—
Strong and upright in his manhood,
Gentle, loving, kind and true.
I have wept and prayed, oh! mother,
How I've begged that God would hear
My petition for my father,
And you, my mother dear.

"I am dying now, dear mother,
And before another dawn
I shall bid farewell to earth life—
Who will love you when I'm gone?"
The form beside the couch there kneeling
Trembled as with pain of death,
The white face from out the pillows
Rose, while with deep drawn breath

Spoke the mother, 'mid her weeping,
Struggling with a nameless dread—
"Oh, my child, my precious darling!
Can I live when you are dead?"
Then another form rose upright,
Trembling by approached the bed,
Felt upon his knees beside it,
And in broken accents said:

"Child, I will care for your mother,
And if God calls you away,
I will love her as you've loved her,
Hear, my darling, while I pray.
Our Father,"—low the words came,
Choked with sobs of grief, and slow,
"Spare our darling! if she never die,
Give us strength to bear the blow.

"And again, Oh, Father! hear me
While upon my knees I vow,
I'll forever leave the wine cup
Which has brought me thus so low."
"God, I thank thee," the child murmured,
Drooping low her lovely head;
Then a hush reigned in the chamber,
And she fair, sweet child was dead.

KNOWLEDGE is no burden.

A FINE STOCK FARM AND FACTS FROM REAL PRACTICE.

On a clear, bright December morning, such as would be called a Spring morning in any other country, we found a seat on board the Southern Pacific train and rode to Mountain View Station. Along the road farmers were busy plowing and putting in crops of grain. The early-sown and volunteer fields, and the pastures, were as densely green as fields and pastures get to be in the Atlantic States in the month of May. The only sign of Fall and Winter was the slight frost that in places shone white as spotless snow, in contrast to the tender green, and the nearly leafless trees, whose freshly strewn, drifted leaves rustled beneath the tread, as all Autumn leaves do. A blending of Spring and Autumn at once inspired the soul with its life and tinged it with sadness. The bright skies, the singing birds, and the green fields said Spring, and new life, and joy, while the work of Autumn was as clearly visible in bleached stubbles and fallen leaves.

From Mountain View Station, which is a small railroad village, containing the usual taverns, saloons, stores, blacksmith, etc., we walked some three miles, past several snug little farms, past the old town of Mountain View, which was established before the railroad was built, a better looking place than the new one, but composed of about the same number of inevitable saloons, etc., and past more neat farms, until we finally halted at the fine stock farm belonging to

S. B. EMERSON.

This is a farm we have long contemplated visiting. Mr. E. has been farming where he now is over twenty years. His experience has been varied and large, and he has given as much attention to the breeding of valuable farm stock as any man in the State. We not only desired to see Mr. Emerson's farm and to look at his stock, but to obtain facts and get his ideas on the most essential matters pertaining to his business as a farmer, so as to report his methods, etc. Not finding him at home when we arrived, we found in his foreman of the stock yard, Mr. Jerome, an intelligent, kind and trusty man, and from him gained much useful information.

On Mr. Emerson's return, we were induced to remain all night, and although he did not introduce us to his wife, we were treated as generously by a bachelor, in a bachelor's abode, as the most hospitable lady in the land could have treated a husband's friend. But how a good-looking man with a farm can be engaged in the fine stock business without a wife, is something of which the public ought to have a right to demand an explanation.

As we do not often ramble, if our readers will excuse the license we have taken in this long preamble, we will proceed to business.

For several years, Mr. Emerson has paid a good deal of attention to raising fine dairy stock. He imported the first

HOLSTEIN STOCK

to this Coast, and has taken several first premiums on them at different fairs. He has now the fine Holstein bull Oppodocs 8th, which he is serving to about fifty fine heifers, the product of another fine Holstein bull and Durham cows selected on account of their good milking qualities. The Holstein stock is large, black and white, not admired so much for form as for milk-producers. The cross with Short-horns has greatly improved the looks of the stock, and, as the Durham cows were all fine for milk, while it has given a greater beef value to the heifers, it has probably not detracted from their which took first premiums at the State Fair this season.

value as milkers. These heifers he holds at $150 each. Mr. E. has now some 45 head of

DURHAM COWS AND HEIFERS,

full bloods and grades, worth $100 and upwards each. To these—several of which have now young calves by Sheriff, and are giving large quantities of milk—he is serving the fine

IMPORTED BULL, SHERIFF.

This is the bull Mr. E. imported last season together with the cows Cambridge and Isabella, the pedigrees of which here follow:

SHERIFF, red; calved 8th June, 1870; bredby A. J. Roberts, Esq., Lillingstone Dayrell, Bucks, England; got by Cherry Duke *2572,
Dam Seraphina 3d by Royal Essex *1866,
— Spangle by Fitz Clarence *11479,
— Seraphine by Sweet Willum *7571,
— Seraphina by Earl of Essex *6955;
— Sapphire by Stratton *5536,
— Ruby by Fanatic *1996,
— Rufe by Red Rover *1902,
— ——— by Rufus *2576,
— ——— by Emperor *1014.

S. B. EMERSON.

ISABELLA 23d, roan; calved 24th February, 1872; got by Knight of Canada [736], 6243,
Dam Isabella 14th by 12th Duke of Northumberland 4744,
— Isabella 3d by Buccaneer *11217,
— Isabella Howard by the Yeoman *12220,
— Idalia by Lord Marlboro' *7166,
— Isabel by Belshazzar *1703,
— Imogene by Argus *579,
— Sister to Isabella by Pilot *496,
— ——— by Agamemnon *9,
— by Mr. Burrell's Bull of Burdon *1796.

S. B. EMERSON.

CAMBRIDGE 12th, red; calved 18th March, 1870; got by Grand Duke of Oxford [325], 5733,
Dam Cabridge 8th by Grand Duke of Morton 5732,
— Cherry Pie by Lord of the North *11743,
— Celia by 3d Duke of Northumberland *3647,
— Cornflower by Bashaw *1692,
— Columbine by Helmsman *2109,
— Columbia by Columella *904,
— Charlotte by Regent *5544,
— Charlotte Palatine by Palatine *478,
— Charlotte by Palmflower *480,
— Crimson by Patriot *486,
— Young Milbank by Driffield *323,
— ——— by Mr. C. Holmes' Bull *314,

S. B. EMERSON.

AIRDRIE DUKE 3d, red; calved 7th July, 1871; bred by C. L. Vanmeter, Clark county, Kentucky; got by Airdrie Duke, 5306,
Dam Gem 5th by Dick Taylor *5508,
— Gem 2d by Fordham Duke of Oxford *2863,
— Gem (imported) by Broker *2993,
— Gulmare by Norfolk *2577,
— Medora by Ambo *6136,
— Blossom by Memnon *2295,
— Sister to Isabella by Pilot *196,
— ——— by Agamemnon *9,
— ——— by Burrell's Bull of Burdon *1769.

Airdrie Duke, 5306, by Airdrie, 2478; dam Ruth 2d by 2d Duke of Airdrie *19600; g. d., Ruth by Challenger (imported) 324, &c.

Dick Taylor, 5508, by Airdrie, 2173; dam, Ruth by Challenger (imported) 324, &c.

Fordham Duke of Oxford, 2863, by Duke of Gloster *11382; dam Oxford 5th by Duke of Northumberland *1940, &c.

Challenger (imported) 324, by 4th Duke of York *10167; dam Chaplet by Usurer *9763, &c.

Airdrie, 2478 (Red Rose tribe), by Duke of Airdrie *12736; dam Duchess by Buena Vista 299, &c. Mr. Thornton, the celebrated English auctioneer, reports: "I saw the Bull Airdrie, rising thirteen years old, a magnificent animal, not too large, but exceedingly symmetrical, stylish and handsome, with a splendid head and fine masculine character."

S. B. EMERSON,

From each of the above cows Mr. E. has now bull calves some three or four months old, sired by the celebrated Airdrie Duke 3d. These are really beautiful, show all the points of good breeding, and are valued at $500 each. Parties desiring to improve their stock would do well to examine this herd of cattle.

HORSES.

As Mr. E. carries on a very large farm, it is necessary for him to keep a good many horses. He says that for the first ten years he made a great mistake in breeding the "thoroughbred" running and trotting stock for farm use, and lost thousands of dollars in the experiment. Let "professionals" say what they will, he knows that such stock is not worth ten cents for farm purposes, and don't want a drop of such blood in horses for farm work. They are too small; too nervous and excitable; lack the disposition and ability to work, and are neither easily managed nor fit for farm use.

THE PUNCH AND CLYDESDALE

are the horses he breeds from. Good common, useful American mares bred to Punch and Clydesdale stallions produce the best horses for the farm by all odds. Mr. E. was very emphatic in his assertions on this point, and evidently with reasons.

SHEEP.

For several years Mr. E. kept a flock of several hundred sheep, Spanish Merino breeds, on his farm. They were profitable in clearing the land of foul weeds, etc., but he now has nothing but

PURE COTSWOLDS.

These he believes to be the most profitable sheep for farmers with limited range of pasture to keep. His opinion is that the best wool is produced on sheep that are about half Cotswold and half Merino. He had sheared from lambs one to three years old, which were bred from Spanish Merino ewes and pure Cotswold rams, on an average, twenty pounds of highest priced wool annually. He is now producing a fine lot of Cotswolds. Some of those imported last season from Canada are probably as fine as any in the world.

Mr. Emerson believes in the principlo that

EVERY FARMER SHOULD RAISE HIS OWN MEAT,

and not rely on a butcher's wagon to come round two or three times a week. It is

poor economy to buy what can be better produced at home. He has given little attention to any special breed of hogs, but prefers the Essex and Berkshires to any others for his own use. When he wants meat he always has a fat pig, sheep, steer, or some kind of poultry at hand, which cost but little to produce.

He has also a family (?)

ORCHARD, VINEYARD AND GARDEN,

which supplies the principle portion of his fruit and vegetables. Owing to the dryness of his soil, it is not profitable nor convenient to produce all sorts of vegetables without irrigation. For this purpose, and to supply

WATER FOR HIS STOCK,

a wooden pipe runs back some two miles to the hills. Large tanks, holding many thousand gallons of water, are provided as a reserve. From these, iron pipes run to the several yards and stables, where are ample watering troughs conveniently situated.

A LARGE BARN

shelters several hundred tons of excellent hay. Long sheds are winged on either side to stable the stock; also L's at one end for stock, arranged into separate stalls. In large corrls are

IMMENSE STACKS OF STRAW.

Every season all the straw produced on the farm is carefully stacked for the stock to feed upon whenever the feed in pastures is short and when Winter storms make the soil soft and easily poached. We saw a portion of a straw stack ten years old. Mr. Emerson says that the straw improves with age. The cattle, horses, and sheep like it best. It seems to be easier masticated and digested after it remains in stack a few years. Instead of scattering his straw in the pastures he lets the stock run to the stack and help themselves. What straw is trampled under feet makes

EXCELLENT MANURE

with the droppings of the animals. This is applied to the surface in the hay fields. This (last) season the Emerson farm produced 400 tons of hay, wheat and volunteer hay. Mr. E. says that when cut at the right time he considers barley hay the best. The only objection is the beards. Wheat hay is better than any other besides barley. Next ranks rye and oats hay. Our California hay, from sown grains, is better than Eastern timothy. To his milch cows and work horses plenty of good hay with ground barley and wheat bran is liberally fed; and good hay is given to other fine stock when pastures are short.

HOLDING HAY FOR A GOOD PRICE

is a regular practice in years of plenty. In this way Mr. E. says that his hay has averaged him at least $20 per ton ever since he commenced to farm. The same with

WHEAT AND OTHER GRAIN,

of which, last year, he raised 24,000 bushels. By holding for a good price when it is cheap, he has made his wheat bring him on an average not less than $2 25 per hundred pounds. For instance, in 1863, wheat fell to 1¼, and by holding one year it rose to 3¼. At another time he held on to his wheat three years to get his price, and got it.

SYSTEM OF CULTIVATION.

The soil on this farm is rather lighter than the average of valley lands—such soil as dries out quickly in unfavorable seasons. Mr. E. says his experience is that the best grain is produced when the soil is plowed not over three inches deep. To cultivate deeper is a waste of team power, and productive of no good results. After plowing for grain, whether it is done early or late, the soil is thoroughly harrowed. A Buckeye drill is used to sow the grain. Forty pounds of White Australian wheat is drilled in to the acre. The drills are run as deep as the plow runs—about three inches. An average of ten acres a day can be put in with the drill. Much better results are gained from using the drill than from broad-cast sowing, to say nothing about the saving of seed. Where grain is grown this year, hay is grown next, and the third year the field is pastured. His stubble fields are are also pastured every season. Mr. Emerson's farm is divided into convenient fields for this system of rotation. He believes that pasturing a field is better than summer-fallowing it. His system of taking off a crop of hay and then pasturing leaves the land clean of all foul weeds, so that his grain is always clean. His hay is also clean, and of first quality, and his pastures are always rich in nutritious feed. This systen of cultivation enriches his farm. It will produce better crops now than it would twenty years ago. He says that one year with another his farm produces forty bushels of wheat to the acre, and it is not uncommon that sixty bushels are taken from a single acre. While the raising of stock is profitable, it makes his farm, for hay and grain, much more valuable. No farmer can afford to carry on a farm in California without stock enough to make some such system practicable. Think of a dry farm of 750 acres producing 400 tons of hay, 24,000 bushels of grain, mostly wheat, and keeping 130 head of horses and cattle, besides. And what this man has done, cannot others do? There is as much in system, or, in other words, in the man, as there is in the soil. And what is done on a large farm, where so much hired help is necessary, surely can be better accomplished on a small farm, where a man can at once supervise and do the most of the work himself.

We must not forget to mention the implement house, or shed, where the Pitt's thresher, thresher engine, header, grain cleaner, plows, harrows, drill, wagons, etc., are sheltered. Also, the blacksmith shop, where all the tools necessary to repair and mend any machine on farm can be found. Mr. Emerson himself learned the use of tools and the carpenter trade when a boy, and he has a handy man whose business it is to keep all implements, buildings, etc., in repair. He was making steel plow points the day we were there. The saving that any farmer can make by having shelter for his implements, and a set of tools so as to be able to repair the most of his own farm machines, is worth considering. Mr. E. remarked, "If we did not take care of and repair our own tools and machinery, it would take all we can make to pay blacksmith and store bills."

There are many other particulars that we might mention in connection with this farm. Our object is to give some of the main points of Mr. Emerson's experience and practice. Our readers can take them for what they are worth. There is no practical farmer who has followed the business for over twenty years on this Coast, but has learned from experience something that would add to the ganeral store of useful knowledge on the subject of farming here, if it could be brought out and made known. We wish our farmers were more communicative and ready to write their experience. If we can get at it in no other way, we propose to visit one or more places each month, and report as nearly as we can in our own style the facts we can gather; such as will, we think, prove of interest to our own farmers, and to those in the East who are thinking of coming here, and are on the look out for just such information as hundreds of our most experienced farmers are abundantly able to give.

Jerseys vs. Durhams and Ayrshires.

Our contemporaries of the Sacramento Valley *Agriculturist* say:

"As for fattening, our experience and observation shows that they (Jerseys) take on fat more quickly than the Durhams or Ayrshires, which is a great point, when we consider that the steers have to be fatted for the slaughter-house."

This may be the extensive (?) experience of the writer, but, if so, it is in exact opposition to that of the great majority of other stock breeders. As milkers, and for the very best quality of rich milk, the Jersey is ahead, but there the merits of the animal rest.

Japanese Maples.

The *Rural Press* mentions a recent importation of twenty-four varieties of maples from Japan by a gentleman of San Francisco. The *Press* says.

The trees were accompanied with beautifully colored plates descriptive of the foliage of all the varieties. These plates were executed by the Japanese, the coloring as well as other parts being done by hand. A leaf of every one of the 24 varieties is given, its form and color being represented in all their minutia. The varieties of foliage displayed here is remarkable, many of the leaves being extremely unique in form and color.

The importation consists of six trees of each variety; all grafts, and all in excellent condition for planting in California. The growth of this interesting family of maples will be watched with a good deal of interest by horticulturists generally, as well as by those who were fortunate enough to procure them.

A Vermont lady fainted away at a party, and when a young man cried out for some one to saw her corset strings in two, she arose, drew a pair of shears, and said she'd like to see 'em saw.

One may live a hero, a conqueror, or king; but he must die a man.

RAISIN VS. WINE GRAPES.

The following advice, from the Sacramento *Recod*, is just such as we have been giving for the last three years. When we stated, two years ago, that raising grapes for wine was not profitable, and that certain parties were rooting up their vines and converting the land into grain fields, a howl was raised against us by the press. We were charged with trying to injure "the great and growing industry of the Pacific Coast—wine-making." We then advised, as we do now—and as sensible writers generally do now—the converting of the wine vineyards into raisin vineyards.

It has been proved that the Mission vine makes the very best root to graft other varieties onto. The White Muscat of Alexander, the best raisin grape, does better grafted on the Mission than it does on its own root.

Planting wine vineyards has kept many men poor, and made many drunkards, in California, but whoever has cultivated fine raisin and table grapes has made money.

But hear what the *Record* has to say about the matter:

Don't Destroy the Grape Vines.—We learn that many persons in different portions of the State who have small vineyards, and who do not wish to make their grapes into wine or brandy, for the reason that wine and brandy cannot be made to pay on a small scale, are talking of digging up their vines. Such persons generally have the Mission or Native California grape, and perhaps no other in cultivation, and we are fully aware that the past experience of such is anything but encouraging for the future, without same change that will prsmise and bring better remuneration for the use of their land, and the labor necessary to cultivrte the vineyard, pick and market the grapes. We also know that at this time a very little additional outlay will bring this desired change. Let these native vines be grafted with the White Muscat of Alexandria or White Malaga grapes, and the second year after grafting the crop will very nearly equal in amount the present crop of native grapes. Instead of having on hand then a grape valueless to you for wine-making purposes, on account of your situation, and good for no other paying purpose, you will have a crop of grapes valuable for raisins.

Then the objection that you have but a limited quantity will not apply, for you can make a small quantity of raisins just as cheaply, and with just as much certainty that they will be of good quality, as though you had the largest vineyard in the State; you can make them, too, when you would be doing little else, when your labor and time cannot be better or more profitably employed. No farmer should be so short-sighted at this time when we all know the great curse and drawback to California agriculture is want of variety in production.

Again, raisins have been made in many localities by the Alden process, and we believe in every instance those making them are well satisfied with the results, both financially and otherwise, and many of them are preparing to increase their vineyards instead of decreasing them. Alden machines will be erected in nearly every locality in the State within a few years, and it would be a pity, just as circumstances are so promising to render your vines valuable, to root them out, and thus throw away all the labor and expense of cultivating them up to the present time and the good prospects for profits in the future.

"See," said a sorrowing wife, "how peaceful the cat and dog are." "Yes," said the petulant husband, "but just tie them together and then see how the fur will fly."

MERINO AND COTSWOLD.

We believe that a good cross between the Merino and Cotswold can be produced that will greatly improve the Merino for useful wool and mutton.—California Agriculturist.

We think that the writer of this paragraph does not fully understand the subject he is trying to handle. We do not believe that a cross between the Merino and Cotswold would give a superior article of wool. It would certainly produce wool of a coarser texture than the pure Merino, and of less length and strength than pure Cotswold wool. We have distinct classes of wool—fine wool, and long wool. Both of these classes have their importance in the factories, and fine wool cannot be worked to advantage without long wool, neither can a fine quality of woolen goods be made without the use of fine wool. There is greater demand for "warp," and has been for years in this country, than for filling. We are satisfied that the time is not far distant when we will have factories to work up every pound of wool raised, and will have to raise long wool or import it. Combining wools used in the Eastern factories are now brought from Canada, where the Cotswold, Southdown and Leicester breeds predominate. The great object in raising long wool is to have it as strong as possible, and in order to do this the sheep must have better range. Whenever an animal falls off in flesh, then there will be a weak place in the fibre, which will be apt to break in combing. In the large Eastern factories it has been found that the wool from pure bred Cotswold and Leicester is the very best warp that can be used, and any attempt to cross these animals with fine wool will not only make the long wool less valuable for warps, but will impair the quality of the fine wool for filling. Experiments are good sometimes, but they should always be made with a thorough understanding of the end aimed at, and the result desired.

In the above the *Sacramento Valley Agriculturist*, of Dec. 20th, has quoted our words correctly. The opinion we expressed was the result of mature deliberation, and is confirmed by the experience of many practical wool growers on this coast. It will be noticed in our report of a visit to S. B. Emerson's farm, that Mr. E. is of the same opinion. We have referred the above criticism of our opinion to Lewis & McCracken, well-known wool growers in our valley. They both say that they have produced and sold wool from Cotswolds graded on Merino sheep, first and second crosses, that has brought 33 per cent. more per pound than the pure Merino wool sheared at the same time. This they have done for the past two years. They assert that a seven-eighth Cotswold from pure Merino produces a combing and delaine wool, which demands the very highest price in the Eastern markets, as can be proved by the quotations of the Boston, New York and Philadelphia commercial papers. On the other hand a three-quarter to fifteen-sixteenth Merino from a Cotswold cross not only gives a better frame, and mutton value to Merinos, but also greatly increases the value of the wool.

On this coast where at two seasons the pasture is short, and where scab is bad, and it is found practicable to shear the sheep twice each year the fine, short, pure Merino wool is not as valuable as the longer staple from a little mixture of Cotswold blood. Markets are governed by the demand for different grades of wool. The wool in the greatest demand now is just such staples as can be produced from graded sheep at either end of the grade, The kinds of clothing the most in fashion and in demand are manufactured from just such wool. In California the woolen mills use neither the finest Merino nor the very longest combing wools, they demand such wool as will make the best goods, for usefulness.

What our contemporary says about "warp and filling" is very true, so far as it goes. A very strong warp is needed for a very fine and week filling, but the best cloth for actual service has both substantial warp and filling. The homespun that the writer of this article used to wear in school-boy-days, woven by mother's own hand on the family loom, was of this sort, and it was almost everlasting. Our only excuse for "expaciating" upon this subject is that it is one of much importance to all wool growers.

To Prevent Ruts in Roads.

A Western exchange contains the following practical hints on this subject:

The art of road-making is yet in its infancy in this country. The roads are not laid out, made, or repaired with reference to economy of draft in using them. Deep ruts are soon worn in them by the common vehicles that past over them, and these grow worse and worse, until they are almost impassable in Spring. Broad cart tires are a partial remedy for these. Longer yokes, both for oxen, and for double horse wagons and carts, compelling the teams to walk in the same line with the wheels that come after them, would be a still better remedy. On most country roads there are two tow-paths and two ruts, and it is not noticeable that the tow-paths are always in much the better order. Longer yokes would bring the paths and ruts together. The feet of the teams would break down the sides of the ruts, and fill them as fast as they were formed. This would improve the road bed, and make the draft of loads easier, We cannot shorten the axle trees without increasing the danger of upsetting, but we can lengthen the yokes with safety. Legislation is needed.

We regard this idea as a most practical one; but unless the whole community of teamsters would observe the rule, it would only make the traveling all the more difficult for the one or two who might try it. Legislation would be the only way to compel a general reform of the kind.

Shipping Meat Instead of Grain.

Mr. Joseph Harris says, in the *American Agriculturist*, "I hope and believe that the time is not far distant when not a bushel of wheat or corn will leave our shores. We ought to raise all our own wool, and supply the world with pork, bacon, hams and lard. To ship a carload of thin hogs from Iowa to Buffalo,, and send four carloads of corn along with them to fatten them here, paying freight and commission on both, is poor policy. To ship corn to Ireland to make pork and bacon for the English market, is equally unwise. Better feed out our own corn at home, and learn to furnish the bacon, hams and lard, which the foreign market demands."

This advice will as well apply to the Pacific States as to the Eastern and Western States. Our wheat and barley, if converted into pork to supply the home market, would pay better than to ship it to Europe and import bacon.

No man knows what good friends are worth until he is without them.

Correspondence.

Experience of a Lady Canvasser—Some Hints for Lady Readers.

Eds. Agriculturist.—I have some more subscribers for your monthly, I write to send their names. Such funny times as one has canvassing! I have many an inward chuckle at the excuses people make for refusing to subscribe, half tempted by the showy chromo. To some I set forth in glowing colors the sound temperance views of the editors which forbid the acceptance of liquor advertisements, while to others I explained the benefits of temperance in diet, and the important hints derived from the Hygienic department, and the valuable information gained on horticulture and agriculture for those cultivating the soil. "Wal now," said one communicative old lady, "there's Susan Ann, she sets a store by picters. Her bedrum is a sight ter behold, with the curiousest scenes out o' the *Harper's Weekley* and the New York *Graphic*, is that what they call it? I know pretty well she'd like ter patronize yer. How much do you say for the hull four of them picters without the paper, which, I dare say, there ain't a soul in the house would ever look at. Not sell the chromos without subscribing for the paper? Well I never! There's no use talking, Susan Ann has just enough money laid by to get her a smart hat for the Thanksgiving time, and I don't know about her layin' it out for readin' matter. I guess, on the whole, you'd better call agin when the gal is to hum, and then we'll give you an answer."

Several families had more books and papers subscribed for than they found time to read. One young mother, with three babies toddling around her, said she could not see her way clear to sit down from morning till night except to tend to baby. "Is there another baby?" I asked. "Yes indeed!" and she led the way into a back room where lay, stretching itself, a tiny creature, fat and good natured. The cooking, washing and ironing, and caring for these four, besides the family mending, and meals to be regularly served when *father* comes home, devolved upon this one young creature, scarcely twenty-five years of age. At night, when all the "bairns" were tucked up in their little beds, I can well imagine the state of mental exhaustion she must be in, and a swift walk in the fresh air would be far more conducive to health than sitting at home reading.

One whose name I send told me she hoped each paper contained something in the domestic line, for really we all need new ideas on the proper way of doing things which cannot be learned from school books.

Everywhere I go I find women struggling for a better way to get through with life's disagreeable duties. A young wife, fresh from boarding school life, tells me she wishes she could have spent a little time before her marriage in watching a good housekeeper manage her work, for, though her husband provided a Chinee boy to do the cooking, she found it very humiliating to confess even to herself her incapacity to tell him how to concoct some favorite dish her husband's mother made to perfection. It is well perhaps for the health of the coming generation that our young women are so deficient in the old system of cooking which has sent so many to their graves or left them utter wrecks upon society—living illustrations of the effects of intemperance in cooking. If we could but have the new system of simple diet introduced and presented in a favorable light, these young mothers would spend less anxious time nursing their babies through teething and the little ailments of childhood; the wet compress to soothe to sleep when bowels are irritated; the hot bottles for the feet when cold—and many other simple remedies so grateful to the little, fretful sufferers."

Come all ye successful mothers of strong, healthy children, send in your experience to help other mothers to save their little ones from the destroying angel, and all the good thoughts which come to us in our homes which have a tendency to assist others in the holiest work given to woman, the rearing of the young, let us not keep to ourselves, but share with all who read the columns of the California Agriculturist. Nell Van.

Nicolaus, Sutter Co., Cal.,
December 8th, 1874.

Eds. Agriculturist:—Please find enclosed $1 75 as per your statement of my account due you.

I like the Agriculturist as a good friend to the farmer and to all classes of mankind. The cause of my discontinuing to be a subscriber is unavoidable, having lost by death, in July last, my wife, daughter and son—I am therefore left a wanderer on the earth, no permanent home or address. With good wishes for the success of the Agriculturist, I am, Respectfully,

Jas. O. Harris.

We extend our heartfelt sympathy to our friend in affliction, and wish him consolation of spirit above the reach of ill.

Live Stock and Population.

Professor Thorold Rogers, of Oxford University, England, has made up a curious return of the proportion of domesticated live stock to the population in the most prominent countries in the world. It shows the following results:

Great Britain has one cow to ever twelve persons, a sheep for everybody, and one pig for every six.

France has a like proportion of sheep, a double share, comparatively, of cows, but only one pig to six persons.

The Swedes have a cow between three and one-half of them, a sheep between two and three-quarters, and a pig to a baker's dozen.

There are as many sheep as there are Norwegians in Norway, when they are all at home, and two and one-half of them—the Norwegians—are entitled to a cow. They can have one and one-eighteenth of a pig each.

Denmark has a cow for three persons, as many sheep as persons, and a pig for four and three-quarter persons.

Prussia, with her usual uniformity, has an equal number of cows and pigs, one to every five inhabitants, besides a sheep apiece all round.

Wurtemberg has a quarter as many cows as people, a sheep to two and three-quarters and a pig to seven.

Bavaria rates the same as Wurtemberg, as to cows and sheep, and is as much better off for pigs as one-fifth is better than one-seventh.

Saxony has a sheep and a pig for every eight persons, and a cow for every six.

Holland has a cow to four, a sheep to four, and a pig to twelve persons.

Belgium has a cow to every six persons, a sheep to nine, and a pig to eight (which is an Hibernicism).

Austria has a cow to six, and a sheep and a pig to every five persons.

Switzerland runs up to the Swedish standard on cows, one to three and one-half persons, and has a sheep for five and a pig for seven and one-half persons.

We Americans close the list with a cow for every four of us, a sheep apiece, and one pig to every one and one-half.

Meeting of the National Grange in Charleston.

The National Grange, Patrons of Husbandry, of the United States will commence its annual session in Charleston, on the first Wednesday in February, 1875. It will be a great occasion for this city, for the State of South Carolina, and for the South generally—indeed, we may say, for the whole country, since it will promote, as nothing else could, the true unity of the Republic and fraternal feeling and kindliness among the people of all parts of our land. It will bring here representative men from every State and Territory of the Union, and the British Provinces, all working together for the common good and all bound to each other by the most sacred obligations and the closest brotherly ties, The spectacle will be impressive and its significance of the gravest import. The representatives of the Granges come here for work, and that work will be of the most serious and important character. We trust it will be wisely performed. But we believe in recreation as well as in work, and the Patrons of Charleston and of the State intend to provide such means of recreation as will make the visit of our brothers and sisters from abroad as pleasant as we have no doubt it will be profitable. Next month we hope to be able to give our programme of reception and entertainment in full. In the meantime, brothers and sisters of the North, the South, the East and the West, be assured that a warm, hearty, fraternal welcome awaits you in this famous old historic "City by the Sea." We open the doors of our homes and our hearts with true Southern hospitality to all who come with the Pass-words and Signs of the "Noble Order of Patrons."—*Rural Carolinian for December.*

Roots for Stock Feeding.

In Brittany, the parsnip is becoming the favorite root for stock feed, and its culture is extending. In the Channel Islands this root forms a large portion of the fodder to the Jersey, Guernsey and Alderney cows, and much of their value as rich milkers is undoubtedly due to the use of this root for a long series of years. It is well known to physiologists, says the New York *Tribune*, how great an effect upon the condition of a breed of animals is caused by a long period of careful feeding, and this is a conspicuous instance of it. This root in many parts of France is substituted for oats as feed for horses, sixteen pounds a day being given with the best effect. For pigs it is also largely used, nine pounds of cooked roots being fed four times a day. One great advantage of this root is its hardiness; the supply for Spring may be left in the ground all Winter, and is in the best condition to harvest at any time when needed.

Orange Culture in Upper California.

The San Francisco *Chronical* tells of a cluster of sixteen oranges on a limb two feet long that grew at Camp Seco, in the orchard of J. J. Mackay. It says:

The fruit is larger than the Los Angeles oranges and is sweet and juicy. The tree upon which it grew is about twelve years old, but the fruit was grafted upon it a few years ago. Mr. Mackay has been very successful in demonstrating the fitness of that section for the culture of the orange. The trees bear prolifically. One branch in his orchard last season had a cluster of twenty-six oranges upon it. Mr. Mackay has found a ready market for the fruit. In a few years many of the hills of that section, now comparatively unproductive, will be waving with orange groves and returning a handsome reward to husbandmen.

Those who taught us to talk omitted to teach us when to hold our tongues.

Domestic.

Cooking Eggs.

Eggs bear a relation to other animal food similar to that which seeds bear to other vegetable food. They are the depositories of vitality, stored up to form a new link in the continuation of the species. They are probably the purest form of animal food, though they compare unfavorably with seeds in many respects. They lose their vitality sooner, and they partake more or less of whatever impurities may have belonged to the animal that produced them. They are not so nutritious as some of the seeds, and they require more care in cooking.

Like seeds, one of their principal ingredients is albumen, which is nearly pure in the white; but, unlike vegetable albumen, it coagulates with heat; if the heat is great, becomes so hard as to be extremely difficult of digestion. Hence eggs are more easily digested raw than cooked, and hence also the objection to hard boiling. Dr. Beaumont found bits of harh-boiled egg-white, no larger than a pea, sometimes remained in the stomach after everything else had yielded to the action of the gastric juice. Such logic is unanswerable. He deduced from it the importance of careful mastication. We women can go a step further, and find in it an intelligent reason for so cooking the eggs that they will not require this extra care. Fried eggs are still worse than those which are boiled, both because subjected to a greater degree of heat, and because of cooking fat into them.

Even in the common method of boiling them rapidly in "three and a half minutes" the albumen next the shell is quite too hard. It should be uniform and custard-like, and this is secured by the method, now becoming quite common, of merely letting the eggs stand from seven to ten minutes in hot water. This should be boiling hot at first, but the cool eggs reduce its temperature somewhat. The exact time required will vary with the relative proportions of eggs, with the heat and thickness of the utensil used, with the warmth of the place where it stands, and with the weather also, a little more time being required in dull weather. The cook will soon learn what allowance to make for her utensils; and for the rest she must use her judgment every time. They are not so easily spoiled, however, as in boiling. If left in a little too long they can be plunged into cold water for a minute or two. If kept hot until the whites stiffen, the yolks will not be hard. The yolk should be cooked just enough not to break rapidly when turned out. These are properly speaking not "boiled eggs," but "curdled eggs."

These curdled eggs make an admirable dressing for many breakfast dishes—boiled sauap, oatmeal mush, cracked wheat, and especially small hominy. The gentle method of cooking eggs may also be observed in making egg-toast. Have the milk almost boiling, in a flat dish, and break in the eggs one by one, cooking a few at a time, and being careful not to let them run together. Sprinkle in a little salt, and let them stand hot and covered until firm enough to take up without breaking. Then have ready some split batter biscuit (gems), softened in hot milk and laid on a platter, and when the eggs are done dish them one on each half of a biscuit and serve warm. This is a handsome dish, and though not quite so digestable as hominy dressed with eggs curdled in the shell, it is still far better than fried potatoes and griddle cakes that form the staple of so many breakfasts.—*Science of Health.*

"Only Fifty Cents a Week."—A few evenings ago a young man said in my hearing "I am getting to be more economical in tobacco using. Now I only use fifty cents' worth (?) a week. I used to use nearly double that amount, but have quit using so much, but *must have* fifty cents' worth."

Only fifty cents a week; which is only twenty-six dollars a year; which is only *six hundred and fifty dollars* in twenty-five years, saying nothing about the interest—and all for tobacco. And then said gentleman would be only forty-five, and probably would not quit using it. It is quite safe to say that he will chew up and spit out at least one thousand dollars before he dies.

This same fellow frequently talks about the extravagance of women, and says "a man had better be murdered than married." I have always noticed that the men who have the most to say about woman's extravagance and expensive families, used tobacco themselves, and that it was quite a large item in the family account. I suppose their consciences smite them, and, Adam-like, they must say it was Eve. It is rather strange that all of Adam's sons take after their father. And money is not all it costs. Just think of the delightful work of cleaning up after these tobacco-chewers. One cannot help exclaiming: Oh, for

> A spot yet undefiled by those who use the weed,
> And where mankind the rules of neatness heed.

Then, if the one that has caused all this loathsome work chances to come in and does not find the woman "wreathed in smiles," he goes out cursing women for being so cross, and sighing for a land where women are unknown.

Alas! how much money and happiness is annually spent for tobacco.—*Kate Reuel, in Farmers' Union.*

Colored Inks.—The following recipes have been well tested and are commended by good authorities as preferable to the solutions of aniline dyes which are now so extensively used as colored inks:

Green.—Two parts acetate of copper, one part carbonate of potash, and eight parts water. Boil till half is evaporated, and filter.

Blue.—Three parts Prussian blue, one part oxalic acid, and thirty parts of water. When dissolved, add one part of gum arabic.

Yellow.—One part fine orpiment, well rubbed up with four parts thick gum water.

Red.—With the aid of a gentle heat, dissolve four grains of carmine in one ounce of aqua ammonia, and add six grains of gum arabic.

Gold.—Rub gold leaf, such as is used by book-bineers, with honey till it forms a uniform mixture. When the honey has been washed out with water, the gold powder will settle at the bottom, and must be mixed with gum-water in sufficient quantity.

Silver.—Silver-leaf treated in precisely the same manner gives a silver ink. Both these inks may, when dry, be polished with ivory.

Black.—Three ounces crushed gall-nuts, two ounces crystallized sulphate of iron, two ounces gum-arabic, and twenty-four ounces of water.

White.—Fine French zinc-white, or white-lead, rubbed up with gum-water to the proper consistency.—*Boston Journal of Chemistry.*

Fried Potatoes.—Who will say after reading this that a poetic mind will not invest anything with interest. Just think of fried potatoes melting away "like a kiss on the sweet lips, with a dying crackle," etc.:

Select eight large potatoes, pare and slice thin, soak in cold water for two hours, and stir common table salt into the water, one teaspoonful to a quart, and allow them to remain in the brine half an hour longer. Pour them upon a screen to drain, and put on a spider with a pound of clear lard over a brisk fire. Wipe the sliced potatoes dry on a towel; wait until the lard is smoking hot and pour a large plateful into the spider. The result is like a small sea in a white squall, and now the cook shows the artistic soul, which every votary of that noblest of the arts must possess to be worthy of the name. Patient and calm, with steady and incessant motion of the skimmer she prevents adhesion of any too affectionate slices, and watches carefully for the tender blush of brownness to appear. Slowly it creeps, and deepens until it rivals the hue of the fragrant Havana. Haste then takes the place of caution, lest any martyrs burn for the perfection of the others, and they must be quickly spread upon another sieve to drain until dry, and greaseless enough for the fairest fingers, then served hot, to melt away like a kiss on the sweet lips, with a dying crackle like the fallen leaves of Autumn.

Old Potatoes.—An Eastern exchange gives this advice: Potatoes, to be good, should never be exposed to the light, but be kept in as dark a place as possible. After they begin to sprout in the Spring they should be taken up from the bins or heaps and kept in boxes or barrels saved out for family use, instead of picking them over and spreading them every few weeks, put them into enough barrels so that you can easily turn them from one to another. Have one extra barrel, and once every week turn them all out from one barrel to another; this keeps them moving so often that the sprouts cannot grow enough to do much harm. The sprouts which come out from the potato use up the nourishment it contains, and leave it soft, watery and insipid. By treating them as proposed above, they may be kept in condition for the table several weeks longer than by sprouting them, and at the same time save a good deal of work.

Keep it from Them.—Don't give liquor to children. Possibly you can do it with safety but the chances are against it. One of the first literary men in the United States said to a writer: "There is one thing which, as you visit different places, I wish you to do everywhere, that is, entreat every mother never to give a drop of strong drink to a child. I have had a fight, as for my life, all my days to keep from dying a drunkard, because I was fed on spirits when a child, and acquired a taste for it. My brother, poor fellow, died a drunkard. I would not have a child of mine take a drop of liquor for anything. Warn every mother, wherever you go, never to give a drop to a child, as she values its future happiness."

Making Good Paste.—Mix two tablespoonfuls of wheat flour with cold water to a smooth paste by putting in but little of the water at a time; its consistency must be a little thinner than the thickening for stews. Place it upon the fire to heat through without boiling; apply it with a small brush. It is best to make it as needed, though a small piece of alum will keep it from turning sour.

An Economical Way of Making Books for the Little Ones.—Cut pieces of cotton or muslin the size of the book wanted; six leaves will do; bind them together with a piece of ribbon, and on them paste pictures of almost any description. Get the little ones interested; they will soon make a collection. Cutting them out of old books and papers will often keep the little chatter-boxes quiet when mamma is puzzling her brains for something to amuse them. On the first leaf can be pasted letters to spell Picture Book.

Artesian Wells in Tulare County.—We have recently had our attention called to the artesian well bored by Mr. W. S. Chapman on his ranch near the town of Merced. A large stream is discharged from it, which courses its way across the plains ten or twelve miles and finally enters the San Joaquin. Some four or five thousand head of cattle, and as many sheep, depend upon this stream for water. Mr. W. W. Wright informs us that during the past Summer he has met an artesian force of two feet hydrostatic in wells of twenty-five feet which he has bored. There evidently is no difficulty about obtaining artesian water in Tulare Valley.—*Visalia Delta.*

Household Reading.

Home.

MORE than building showy mansions,
More than dress and fine array,
More than domes and lofty steeples,
More than station, power, and sway;
Make your home both neat and tasteful,
Bright and pleasant, always fair.
Where each heart shall rest contented,
Grateful for each bounty there.

Seek to make your home most loving;
Let it be a smiling spot,
Where in sweet contentment resting,
Care and sorrow are forgot;
Where the flowers and trees are waving,
Birds will sing their sweetest song;
Where the purest thoughts will linger,
Confidence and love belong.

There each heart will rest contented,
Seldom wishing far to roam;
Or, if roaming, still will ever
Cherish happy thoughts of home,
Such a home makes man the better,
Sure and lasting the control:
Home with pure and bright surroundings
Leaves its impress on the soul.

Chats With Farmers' Wives and Daughters---No. 2.

BY "JEWELL."

The question often arises in my woman's mind: Which is actually most necessary for the welfare of our children—their present and future—that our entire time be spent in the daily round of duties which "home life" brings to every mother, or that a few moments or hours, daily, be taken to cultivate her mind and fill her soul with inspiration to fresh exertions? I believe that the busy farmer's wife even should take this time, which is rightfully hers, and that she should be provided with books and papers that she may catch glimpses of the outside world, which often seems to have forsaken her in her isolation and heavy burdens. While I do not wish to be harsh, still I feel that a farm life is generally more burdensome upon women than men, and few farmers fully understand and appreciate this fact.

To stay indoors and cook, wash, iron, sew, sweep, etc., every day, month and year, besides the drain upon life and soul of childbearing, nursing the sick, and the responsibility of bringing up the little ones, is actually more than most women are able to do—unless strong in body, which few of our women of to-day are.

I feel hopeful that the future benefit of the Grange movement is to come through its women. Their attendance weekly at the Grange meetings is not only a relief to them, but widens their circle of acquaintances and sphere of social life; and is at once uplifting to both brothers and sisters. The mingling of the feminine element in the business as well as pleasure of the meetings will tend to purify the one and cultivate the other, which must give health and joy to many a home.

EARLY RISING.—Early rising, in civilized society, always tends to shorten life. Early rising of itself never did any good. Many a farmer's boy has been made an invalid for life by being made to get up at daylight, before his sleep was out. Many a young girl has been stunted in body and mind and constitution by being made to get up before the system has had its full rest. All who are growing, all who work hard, and all weakly persons, should not get up until they feel as if they would be more comfortable to get up than to remain in bed; that is the only true measure of sufficiency of rest and sleep. Any one who gets up in the morning feeling as if he "would give anything in the world" to remain in bed a while longer does violence to his own nature, and will always suffer from it—not immediately, it may be, but certainly in later years, by the cumulative ill-effects of the most unwise practice. In any given case, the person who gets up in the morning before he is fully rested will lack just that much of the energy requisite for the day's pursuit.

As a people, we do not get enough sleep, we do not get enough rest, we will not take time for these things; hence our nervousness, our instability, our hasty temper, and the premature giving out of the stamina of life. Half of us are old at three score, the very time a man out to be in his mental, moral and physical prime. Half of our wives, especially in the farming districts, die long before their time, because they do not get rest and sleep proportioned to their labor. Nine times out of ten, it would be better for all parties if the farmer should get up and light the fires and prepare breakfast for his wife, she coming directly from her toilet to the breakfast table, because it almost always happens that she has to remain up to sit things right long after the husband has gone to bed, when he really has nothing to do after supper but to go to bed. This is a monstrously cruel imposition on wives and mothers.—*Hall's Journal of Health.*

FOR SELF OR FOR OTHERS?—The secret of dullness and discontent with many a life is, that it has no other life to bless. It is shut up in itself. It never breaks bounds and gets abroad. Get out of self, begin to think of another, to care for another, and all the tides of the soul are in motion. The dull self-brooding is at an end.

When self is forgotten, its weariness and fretfulness are forgotten. It is delivered from its own burdened consciousness, by entering with hearty good will into the experience of the friendless and helpless.

This is the cure which is needed for jaded spirits. It is sovereign and infallible. Find somebody to help, and you help yourself; some heart to cheer, and you cheer your own; some burden of another to bear, and yours becomes light; enter into the straitened lot of one in need, and you get enlargement from your own bondage; learn to weep with those that weep, and your tears are a balsam to your own heart; rejoice with those that do rejoice, and your own griefs are assuaged, and your joys are doubled. It may be but little that you can do; do that little, and the world is so much happier and better, and a brighter sky shines upon your face. You have but an ounce or two of strength to spare; share that with one who is spent, and the perfume of this small benefaction will be to you as reviving incense. The remedy is safe and sure.

GIRLS, let us tell you a stubborn truth. No young woman ever looked so well to a sensible man, as when dressed in neat, plain, modest attire, without a single ornament about her person. She looks then as though she possessed worth in herself, and needed no artificial rigging to enchance her value. If a young woman would spend as much time in cultivating her temper, and cherishing kindness, meekness, gentleness, mercy, and other qualities, as most of them do in extra dress and ornaments to increase their personal charms, she would, at a glance, be known among a thousand. Her character would be read in her countenance.

"DEW DROP BILLIARDS" is the sign over a Cincinnati billiard saloon. The advice is good. We second it, and say to all young men, "Do drop billiards."

Ants vs. Caterpillars.

The Belgian *Official Journal*, referring to the ignorant conduct of those who destroy all kinds of birds and insects indiscriminately, insists on the necessity of children in primary schools being taught to distinguish between useful and noxious insects, and thus to exercise their destructive faculties against the latter only. The writer proceeds to say that the ant, which is very disagreeable and inconvenient in many respects, does excellent service in chasing and destroying caterpillars with relentless energy. A farmer who had noticed the fact, and had had his cabbages literally devoured by caterpillars, at last hit upon the expedient of having an ant hill, or rather nest, such as abound in pine forests, brought to his cabbage plot. A sackful of the pine points abounding in ants, was obtained and its contents strewn around the infested cabbage plants. The ants lost no time, but immediately set to work; they seized the caterpillars by their heads. The next day heaps of dead caterpillars were found, but not one alive, nor did they return to the cabbages. The value of ants is well known in Germany, and although their eggs are in great request as food for young partridges, pheasants and nightingales, there is a fine against taking them from the forests. The ant is indefatigable in hunting its prey; it climbs to the very tops of trees, and destroys an immense quantity of noxious insects.

AT the late election in Michigan, the question of woman's suffrage was voted on, and 39,000 votes were cast in favor, which would seem to indicate the number of advanced men in the State. We all know that no State is much ahead of Michigan for schools, farming and fruit-growing. The Grand Rapids *Post* relates the following:

A dirty, debased, and ignorant-looking man came in to vote. Said one of the ladies, offering him a ballot,

"I wish you would oblige us by voting this ticket."

"What kind of a ticket is that?" said he.

"Why," said the lady, "you can see yourself."

"But I can't read," he answered.

"Why, can't you read the ballot you have there in your hand, which you are about to vote?" the lady asked.

"No," said he; "I can't read at all."

"Well," said the lady, "this ballot means that you are willing to let the women as well as the men vote."

"Is that it?" he replied. "Then I don't want it; the women don't know enough to vote."

Short-Horn Statistics.

The National Association of Short-horn Breeders, which recently met at Springfield, Illinois, having entrusted Aleck Charles, Cedar Rapids, Iowa, with the work of procuring complete statistics of all Short-horns now living in the United States and Canada, for publication in the report of their proceedings, we would urge upon every one of our readers who are breeding Short-horns, either upon a large or small scale, to send in prompt and careful returns; and those who have not received blanks for that purpose will be furnished them free of charge promptly, on application to Mr. Charles. Short-horn men will please give this their very earliest attention, for by so doing the forthcoming report of the American Association of Breeders will be made the most valuable and interesting publication ever issued in this country.—*National Live Stock Journal.*

A COW WITH A WOODEN LEG.—An English country paper records the following facts: A young cow on the farm of Mr. Wilson, in Borrowdale, Cumberland, recently broke her leg. It was amputated, and a wooden leg supplied, and she is now walking about and doing well.

The Dairy.

Something About Milk.

THE Massachusetts *Ploughman* has been giving a series of articles on milk, from which we extract some curious iteme of information:

Milk is produced by the females of all that class of animals known to naturalists as the *mammalia*, and was evidently designed by Nature as the nourishment of the young of those animals. As such it has been used by man from the earliest periods of the human race. The milk of the camel is still used in Africa and in some parts of Asia; that of mares in Tartary and Siberia, and that of goats in Italy and Spain, while that of the cow is most universally used and most widely esteemed.

Milk is a compound, an opaque fluid, generally white, of a sweet and agreeable taste, and made up of an oily or fatty substance known as butter which gives it its richness, of a caseous or mucilaginous substance which gives it its strength and from which cheese is obtained, and of a serous or watery substance which makes it refreshing as a beverage, with a small per cent. of sugar of milk to which it owes its sweetness.

In the milk of the cow, which we are now to consider, the fatty substance ranges from two and a half to seven per cent. the cheesy matter from three to ten per cent. and the watery parts from eighty to ninety per cent.

Although to the naked eye milk appears to be one homogeneous mass, yet, when viewed under the microscope, myriads of little globules of various sizes and forms, but mostly round or ovoid, seem to swim suspended in the watery substance, and on a more minute examination it will be found that these are the oily particles encased or surrouned by a cheesy film, and which by their comparative lightness are soon to rise to the surface and form the yellowish, semi-liquid coating known as cream.

These particles are so minute that they filter through the finest paper, and they are so generally diffused through the mass of milk as it is drawn from the cow, that they do not interfere with its ready assimilation with water or other unfermented liquids, although its weight is four per cent. more than that of water, and notwithstanding the difference in specific gravity.

Cold condenses milk, while heat liquefies it. The elements of which it is composed, varying as they do in character and specific gravity, rapidly change their relative positions when the milk is at rest. The oily or buttery particles rise to the surface, while the serous or watery matter, on account of its greater weight falls to the bottom.

The oily particles of milk in rising bring up along with them a large proportion of the cheesy matter adhering to them mechanically, and some of the watery particles by which they are surrounded. If these particles rose up pure and free from the admixture of the other substances they would appear in the form of pure butter, and one of the principal objects of churning is to free or disengage the oily substance from the other elements, which in rising it has brought up with it.

The caseous matter, under the influence of high temperature, has a tendency to collect and form a body by itself, known as curd, and in forming this partial solidification it becomes separated from the whey, or serous matter, so that after a lapse of time, the three principal constituents of milk will appear in forms distinct and peculiar to themselves, and we then have the cream or butter, the curd or cheese, and the liquid whey as separate elements. This separation sometimes takes place with great rapidity, especially under the influence of great heat or sudden changes of the atmosphere, and not unfrequently before the butter particles have had time to rise to the surface.

The cheesy matter previous to coagulation is easily soluble in water, but after a complete coagulation has taken place it becomes insoluble.

The serum or whey is not left perfectly pure and free from mixture, but still holds in suspension some cheesy and butter particles which can be separated by ebullition. It also holds in suspension some alkaline elements, in a basis of potassa, and some sugar of milk amounting usually to about three and a half per cent of its weight.

The separation of the three chief elements of milk is much more readily effected in that of the cow than in that of other animals, and the apparent affinity which they have when first drawn from the udder is only instantaneous, since the separation commences even before milk has left the udder, and is continued with considerable rapidity as soon as it comes to rest in a favorable position.

When subjected to great heat, or when brought to a boiling point, milk loses its finest and most delicate properties and its flavor or fragrance.

The number of stomachs or powerful digestive organs of the cow, and of the ruminating animals generally, is wonderfully adapted to promote the largest secretions of every kind.

The specific gravity of milk is greater than that of water, that of the latter being one thousand, and that of the former one thousand and thirty-one on an average, though it varies greatly as it comes from different cows, and even at different times from the same cow. A feeding of salt given to the cow will, in a few hours, cause the specific gravity of her milk to vary from one to three per cent.

Milk will ordinarily produce from two to fifteen per cent. of its own volume in cream, or, on an average, not far from twelve and a half per cent. Eight quarts of milk will, therefore make about one quart of cream. But the milk of cows that are fed so as to produce the richest milk and butter will often far exceed this, sometimes giving over twenty per cent. of cream, and in rare instances twenty-five or twenty-six per cent. The product of milk in cream is more regular than the product of cream in butter. A very rich milk is lighter than milk of a poorer quality, for the reason that cream is lighter than skim-milk.

Of the different constituents of milk, caseine is that which in its composition most resembles animal matter, and hence the intrinsic value of cheese as a nutritive article of food. Hence, also, the nutritive qualities of skimmed milk, or milk from which the cream only has been removed, while the milk is still sweet. The oily or fatty parts of milk furnish heat to the animal system; but this is easily supplied by other substances.

Managing Cows in Holland.—From a condensed report of Dr. Staring, in the London *Field*, on the Dairy Husbandry in Holland, we make the following extract:

In the dairying districts—mostly exposed tracts of land without a tree—the usual plan of protecting cows against the cold and wet is to fasten round their bodies a thick tow cloth, and occasionally a rough shedding is erected to serve them as shelter. On their return to the stables they are attached by the neck to two stout posts, having movable rings which slide up and down as the animal changes its position. The usual arrangement is for the cows to stand face to face in two rows. Between the latter runs a feeding passage, and behind the cattle there is a channel and plenty of room to remove the droppings. From time to time pea, rye, barley and oat straw are substituted for a change, and either rape or linseed cake—about a cake a head—is dissolved in the water they drink. Some farmers, however, prefer to give the cake in its dry state, thinking it goes further in that way, and is more wholesome. Turnips are not much grown or used as cattle food in the dairying districts; they are occasionally given, however, as a supplementary article of diet, also beets, carrots, white and red clover, and spurry; and in the vicinity of towns the refuse of breweries and distilleries is a common feeding material.

The calves are never allowed to suck, and receive for the first four weeks pure milk, after that sour milk, buttermilk, or whey, according to circumstances. At the end of four months the same nourishment is given them as to the full-gaown cattle; but they often get sour milk, etc., besides. In those localities, such as the neighborhood of Nykerk and Nymegen, in Guelderland and Veghel, and Breda, in North Brabant, where the fattening of calves is largely and successfully carried on, the usual plan is to put them directly after birth into small pens or boxes, which are just large enough for them to stand up and lie down in, and kept dark. The calves get twice a day as much fresh drawn milk as they can consume, and for the first week each animal is fed exclusively on its own mother's milk. Such importance do some farmers attack to the calves consuming nothing but milk, that they muzzle the creatures in order that they may not chew and swallow any of the litter. A calf fattened in the above way will weigh in ten to twelve weeks, fat and lean together, 150 to 200 pounds.

Give Plenty of Food to Cows.—It is probably true that fifty per cent. of the profit which might be realized from the dairy stock of this country, is annually lost to their owners, from want of the necessary quantity and the proper quality of food which should be given them. L. F. Allen gives experiments by Dr. Rhode-Eldena, of the Royal Academy of Agriculture, in Prussia, of the comparative yield of milk from cows, by pasturing and stable feeding, or soiling, through seven years of each system. The average per cow for the whole seven years in pasturing was, 1,583 quarts, while the average per cow for the seven years of stabling or soiling, was 3,442 quarts. From this result it is seen that the cow is capable of producing one hundred per cent. more than she usually does, provided she is kept in the most comfortable manner, and fed with the greatest milk-producing substances, She may produce but half of the above quantities if not properly housed in the Winter, and scantily fed during the whole year. In either case, the original cost or value of the cow is the same; the care is about the same, while all the loss in her production is caused by a lack in quantity and quality of food, coupled with a lack of comfort during the inclement seasons of the year.

A farmers' milk company, with $200,000 for disposing of the farmers' milk in New York without the aid of middlemen, has started business in Connecticut. This is one of the most important enterprises to the farmers of the Housatonic, Shepang and Naugatuck valleys that has been undertaken. If it succeeds as its projectors anticipate, the milk distributing business in New York city, it is supposed, will go into the hands of an honest company, controlled by the farmers themselves. Thus the ball is rolling.

There are now in the State of New York more than 500 cheese factories, using the milk of over 200,000 cows.

Franking a Horse.—The only one of Col. Dodd's old associates who is living, is Mr. Charles Forrester, the present superintendent of the newspaper department in the Postoffice. He remembers when Col. Reeside, the great mail contractor of former days, had to bring a horse behind his mail coach from Washington to New Jersey as mail matter. The animal was forwarded by a member of Congress, under the franking privilege.—*New York Sun.*

Poultry Yard.

Eggs vs. Meat.

WOULD it not be well to substitute more eggs for meat in our daily dict? About one-third of the weight of an egg is solid nutriment. This is more than can be said of meat. There are no bones and tough pieces which have to be laid aside. A good egg is made up of ten parts shell, sixty parts white and thirty parts yolk. The white of an egg contains eighty-six per cent. water; the yolk fifty-two per cent. The average weight of an egg is about two ounces. Practically, an egg is animal food, and yet there is none of the disagreeable work of the butcher necessary to obtain it. The vegetarians of England use eggs freely, and many of these men are eighty and ninety years old, and have been remarkably free from illness. A good egg is alive. The shell is porous, and the oxygen of the air goes through the shell and keep up a kind of respiration. An egg soon becomes stale in bad air, or in dry air charged with carbonic acid. Eggs may be dried and made to retain their goodness for a long time, or the shell may be varnished, which excludes the air, when, if kept in a moderate temperature, they may be kept good for a number of years. The French people produce more eggs than any other, and ship millions of them to England annually. Fresh eggs are more transparent at the center, old ones on the top. Very old ones are not transparent in either place. In water in which one-tenth of salt has been dissolved, good eggs sink and indifferent ones swim. Bad eggs float in pure water, The best eggs are laid by young, healthy hens. If they are properly fed, the eggs are better than if they are allowed to eat all sorts of food. Eggs are best when cooked four minutes. This takes away the animal taste that is offensive to some but does not so harden the white or yolk as to make them hard to digest. An egg, if cooked very hard, is difficult of digestion, except by those with stout stomachs; such eggs should be eaten with bread masticated very finely. An excellent sandwich can be made with eggs and brown bread. An egg spread on toast is fit for a king—if kings deserve any better food than anybody else, which is doubtful. Fried eggs are less wholesome than boiled ones. An egg dropped into hot water is not only a clean and handsome, but a delicious morsel. Most people spoil the taste of their eggs by adding pepper and salt. A little sweet butter is the best dressing. Eggs contain much phosphorous, which is supposed to be useful to those who use their brains much.—*Poultry Review.*

SEX IN POULTRY.—The following is from a correspondent of the London *Journal of Horticulture:*

One of your correspondents revives the old question about the sex of eggs; I send my experience. Last year an Old Country poultry-keeper told me he could distinguish the sex in eggs. I laughed at him, and was none the less skeptical when he told me the following secret: "Eggs with the air bladder on the center of the crown of the egg will produce cockerels; those with the bladder on one side will produce pullets." The old man was so certain of the truth of this dogma, and his poultry yard so far confirmed it, that I determined to make an experiment upon it. I have done so, carefully registering every egg "bladder vertical," or "bladder on one side," rejecting every one in which it was not decidedly one or the other, as in some it is only very slightly out of the center. The following is the result: Fifty-eight chickens were hatched, three are dead, eleven are yet too young to decide upon their sex; of the remaining forty-four every one has turned out exactly true to the old man's theory. This, of course, may be an accidental coincidence, but I shall certainly try the experiment again. I am now trying the same theory upon ducks' eggs.

A Westchester, Pa., man gives the results of his experiments as follows: Last Summer I hatched 122 chicks from eggs selected on this principle, 119 of which were pullets. I always select eggs of medium size, believing them to be the best for this purpose. I then get a large kerosene lamp and take an egg in my right hand, between the thumb and two forefingers, big end uppermost, and hold it as near the light as possible; then lay the little finger of the left hand across the middle of the middle of the egg. This will throw the light in the egg; then turn it around slowly, and you will perceive a dark spot the size of a three-cent piece, directly in the center of the large end, or on one side. As I raise poultry for eggs and for market, I of course set only eggs for pullets, with a few for cockerels to replace the cocks of last year. It would be well for an amateur to break a few eggs, empty out the contents, and examine the large end, where the sir chamber in the dispositions will be distinctly seen.

THE principal points by which to discern the quality of the flesh in a fowl are, says the *Cottage Gardener*, the color of the feet and the kind of skin. The yellow foot generally indicates a fowl with tough flesh, heavy bones, and yellow fat. It is very rare that this color does not show itself in the skin. However, it does not exclude certain qualities of the flesh in the pure descendants of the two exotic races, Cochin China and Brahma Pootra. With the exception of yellow and green, which can never be recommended, all other colors, from black to white, are equally indications of an excellent flesh. When the skin, and, above all, that of the sides and breast, is of a fine tissue, delicate and easily extended, also having a rosy-pearled color, one may be certain that the flesh is good, and will fatten rapidly.

GAPES IN CHICKENS.—Some eighteen years ago I came to live on an old farm, where the gapes made such fearful ravages on the young chickens that it seemed almost needless any longer to set the hens. I came across the horse-hair remedy in the *Country Gentleman*, tried it, and the result was that I operated the first Summer on from fifty to sixty chickens with perfect success. Chickens very rarely have more than three or four worms, but I have taken as many as eight from young turkeys. Each year the number attacked decreased, till last year there were only two. None die from the treatment, but you need to take them when they first begin to gape. For a few moments after they leave your hand, after treatment, they will gape and sneeze a little, and then are as bright and lively as ever. It distresses me to read of so many losing their chicks when so simple a remedy will save them. Some think the horse hair cruel, but it is a mistake, and even if cruel, it is soon over. I take no particular care of my chicks, beyond cooping them, feeding them corn meal and giving water.

Remedy.—Take a stiff horse hair, make a pointed loop, insert it in the wind-pipe, push it down as far as it will go, with the rest of the hair between your thumb and forefinger; twist it quickly, then draw it out. You may not get any worm the first or the second time, but they loosen so that the third or fourth time they come; sometimes all three will come at the first drawing. The operation must be done quickly; it needs two to do it—one to hold the struggling chick, the other to operate.—*C. B. S., in Country Gentleman.*

We have cured the same complaint by dipping a feather into kerosene and running it down the windpipe, twisting it around two or three times. It loosens the worms and the chicken coughs them out. It is an easy and sure cure.

TO INSURE THE HATCHING OF EGGS.—A correspondent of the *Poultry Record* gives the following plan as better than sprinkling eggs with water to insure hatching. It is sound, for it is well known that hens which make their nests on the ground are apt to bring off large broods. The earth keeps an equable warmth, and supplies the necessary moisture to the eggs:

I put about two or three inches of fine, moist earth into the box I want to put the hen in, press it down firmly, and have it a little deeper in the center, a handful of straw or hay on top of it, and the nest is ready to receive the eggs. The earth contains all the moisture necessary for the good of the eggs. If your box is deep, more earth may be put in, a foot deep will do no hurt. You say wheat screenings are poor food for chickens. My experience is different. I consider them the best and healthiest food, and use them almost exclusively, and only give a little corn at night. Wheat screenings will make the hens lay, keep them from getting broody, and, I think, will in a great measure prevent cholera.

No amount of care in preparing the nest or moistening the eggs will insure a large brood if the eggs are not good. After eggs have been under the hen three days the germ becomes sufficiently developed to make it determinable whether the egg will hatch or not. They may be examined at this stage, by holding before a light, and those which show no evidence of fecundity discarded and replaced by fresh eggs. Care must be taken not to handle them too much, and fresh eggs should not be placed in the nest later than three days after the hen begins to set, or she may leave the nest before they are hatched.

WHEN poultry is kept in a yard, it is best to dig up a small corner occasionally to let them hunt for worms and beetles, and then sow it in oats and corn and lettuce. They always want a dusting place; a box of ashes with sulphur intermixed is what they need for this.

That farmers and manufacturers are mutual producers and consumers—that is, that each is a consumer of the other's products—is quite plain. It ought to be equally plain that it is for their mutual advantage and profit that they be in juxtaposition. The cost of transportation between them is a tax on both, and it increases with the distance between them. If the price were fixed to the producer, whether of agricultural or mechanical products, then the cost to the consumer must increase with the distance between them; if the price were fixed to the consumer, the profit to the producer must be diminished as the distance between them increases. As a matter of fact, the cost of intervening transportation is a tax which is divided between them, and this would still hold true were that cost reduced to its minimum. To transportation companies and middlemen distance may "lend enchantment to the view," but he is an unwise farmer who does not do all in his power to encourage manufacturers to locate beside him.

FARM MACHINES.—The *World* says: Knowledge of machinery is becoming one of the most important requisites in a farmer or a farmer's help. No machine should go upon any farm without the farmer comprehending it in all its parts, the requirement and relation of each part to the other, how to adjust and care for it, how to remedy difficulties that may arise, ank keep the whole machine in proper working condition without the aid of a machinist, unless in exceptional circumstances. It should be the first duty of the hired help to learn the same lesson, if he is to be intrusted with the machine's use. This is urged as a matter of economy. It is frequently the case that a non-observant farmer loses the time of his men and his own, besides making a bill at the blacksmith's or machinist's, when a little gumption and ten minutes' time properly applied would have saved all loss.

Apiary.

Bee Culture in California.

Up to the time of the influx of the gold hunters in 1848-9, says the Sacramento *Record*, the honey bee was unknown in California, and if was as late as 1856 or '57, we think before any were introduced. The first brought into the country found a profusion of wild flowers every where and as a consequence increased in numbers with a rapidity unparalleled in the history of bee-keeping, and made a quantity of honey theretofore unheard of by the most experienced apiarians of the world. While this honey lacked the peculiar and familiar flavor of the white clover and other cultivated crops of the Eastern States and Europe, it was still of an excellent flavor and unexceptional in color, and of course in a new country, where delicacies and luxuries had been scarce and costly, commanded a good price and found a ready market. This attracted the attention of speculators who knew nothing of the science or art of bee-keeping, and soon the country was flooded with bees imported from all parts of the Eastern country. Having been subjected to improper treatment, want of ventilation, sweating, etc., on the passage, and not being properly cared for on arrival, the worst kinds of bee disease soon became very prevalent, and for a number of years the mortality more than equaled the increase. This unexpected turn in the business brought the value of stands or hives down from the speculative price of from $100 to $130 each, to which they reached at the high tide of excitement, to a mere nominal sum, and those who had rushed into the bee business now as anxiously and hurriedly rushed out of it. Many who could not sell their stock at any price simply abandoned them to take care of themselves.

A few men, however, who had been trained to the business, and who entered into it at first as a legitimate business, believing they could with careful management make it pay them a proper return for the investment of their means and their labor, worked right along through all this excitement and speculation, and through the following depression, keeping their bees in a healthy condition, and adopting all the improvements in hives and in management, and increasing their stock and improving it by the substitution of the yellow Italian for the black German bee, and barely paying their expenses from the products of their apiaries, and looking to outside operations for the maintenance of their families. To add to the discouragements and difficulties of these few men who had once been cheated out of the fair and natural reward for their enterprise and labor by the over-speculation and then the following depression, just as they began again to see a better time coming, when they should have a clear field in which their bees could gather honey, and a growing market for the products of those bees, another difficulty, more serious because more permanent than the former stared them in the face.

The open country that had formerly been covered with wild flowers upon which the bees had fed, and from which they had gathered the only good honey, was now being appropriated for stock or for wheat, and for other agricultural purposes. The whole natural bee food was being rapidly destroyed, and none of the crops cultivated supplied the place of it. The peculiarity of the California climate precluded the successful cultivation of the white clover so universal in the eastern country, and which there more than compensated for the wild flowers supplanted by it. With a large stock of bees on hand these few legitimate apiarist found themselves thus deprived of all feed for them, from which any paying amount of honey of good merchantable quality could be made. Then came the dividing up of the apiaries, and an attempt to adopt the nomadic plan of bee-keeping. Some were sent to the mountains and some towards the sea, among the tule islands. This plan gave hopes and some promise of success. A fair amount of pretty good honey was gathered some seasons in the mountains, but the prevalence of the buckeye in these districts, a deadly poison to the bee, was found a great drawback, and finally compelled the abandonment of these fields. A fair amount of honey was gathered from the low tule lands, but of poor quality. As a consequence of these discouragements, the number of those who persevered in the business was continually growing less.

About five years since, however, J. S. Harbison, the leading apiarist of the State, made a trip through the southern counties in search of bee pasture. He found such good promise that soon after his return he removed a small apiary, in the ownership of which he had associated a Mr. Clark with himself, to San Diego. These were the first bees in that county. The success with which this small venture was attended has induced Mr. Harbison to gather up all his bees from all other localities and transfer them to the same county. Mr. Harbison has now in that county two thousand hives of bees, which last year produced 150,000 pounds, or 75 tons of surplus honey of a very excellent quality. Of this he has shipped per railroad over 60 tons to the Eastern States, mostly to Chicago and New York. His sales of honey for the year will equal the nice little sum of $30,000.

This places Mr. Harbison the foremost bee man in the world, so far as money making from the business is concerned, and he undoubtedly occupies the same position as to the knowledge of the business, there not being in the world his equal in this respect. The labor in and about all his apiaries is now done by apprentices, who are availing themselves of the opportunity to learn the business while their labor pays their personal expenses. Eight young men are thus engaged, and some of them have become so expert as to be intrusted with the entire management of some of his apiaries. Other parties, since they have learned the success attending the bee business in San Diego county, have also removed a large number there, and good judges estimate the product of the apiaries of the country last year at $100,000.

Extent and Nature of Bee Pastures.

The bee pastures of the southern counties extend from Santa Barbara to Lower California, occupying a belt of country about eight miles wide—commencing about on an average of ten miles from the coast—approaching nearer or receding further back, according to the topography of the country. This belt is a very irregular, broken mountainous country, mostly unfit for general agricultural purposes, and on this the bee-keepers place their hopes of immunity from the encroaches which have proved their discomfiture in other portions of the State. Experience has shown that the best localitics for the apiary is neither at the highest elevation or deepest depression, neither on the mountain nor in the valley below, but at a point half way between the two. At this point a medium temperature is secured, and the bees are thus placed where they have access to the earliest food in the valleys below and the latest on the mountain above. The distance the bees have to fly to obtain their food is thus divided, which is no small consideration. One can appreciate this last proposition when he reflects that the bees of Mr. Harbison last year gathered up and carried to his several apiaries 150,000 pounds of honey. The honey is gathered from a great variety of flowers, but the chief dependence is on a species of white sage which is found in great abundance on the entire range of country, from Santa Barbara to Lower California, averaging about eight miles wide.

The bee men are rapidly taking up and occupying the best locations in all this region. They are laying out the proceeds of their enterprise and labor in permanent improvements and are preparing to make permanent homes. Though the principal business and dependence is the apiary, they all cultivate some land and keep some cows, some horses and hogs, and some of them some sheep. We are informed that the bee men alone have done more in the settlement of the county of San Diego than all other classes, in the past five years. The land being occupied by the bee-keepers has not yet been surveyed and put into the market by the General Government, but they are taking it up with a view to preempting it as soon as they can do so, and we understand they propose asking Congress for special legislation to enable them to obtain title to large tracts each.

Nature of Bees.—Mr. S. S. Landers communicates to the *Christian Leader* a long article on bees, from which we make the following extracts:

The bee has never failed to attract the attention and study of all naturalists, and of all who feel an interest in the works of nature. Their skillful work seems to manifest the intelligence belonging to the higher orders of animals, and even to surpass, is some respects the intellectual faculties of man.

In a perfect hive of bees, there are three kinds. The "queen," the mother of the whole colony, the "workers," of the neuter gender, those that do all the work, and the "drones," the male bees, who take up room in the hive, live on the products of the worker, but bring in no honey. These three kinds of bees have very different organizations and instincts, and their offices in the hive are entirely different, and yet each is necessary to the others, and all are indispensable to the existence and continuation of the colony.

The queen is a fully developed female. In all animated nature, we usually find the male and female of about the same number, but bees are an exception to this law. Here there is but one female to many hundreds of males, and many thousands of workers which are of neither gender.

The queen is impregnated by copulating but once in her lifetime with the drone while on the wing, high up in the air, and in forty-six hours after her fecundations, all things being right, she begins to lay eggs, and it is stated by those who profess to know, that she is capable of laying 2,000 eggs in twenty-four hours. Huber, a blind Swiss naturalist of great celebrity, advocated the idea that the ovaries of the queen contain a regular succession of the different kinds of eggs necessary to produce the three kinds of bees we find in a hive. He made an experiment which proved to him that if the hive contained no drone comb, she dropped her male eggs at random, and no males were produced, and so if there was no worker comb, she dropped her worker eggs anywhere, and no workers were reared. This, in substance, if the theory of Professor Agassiz, as advanced in his lecture, "Life in the Bee Hive."

But the most generally recognized opinion on this subject now is, that the eggs of the queen are all alike, and that it is only the different kind of cells in which they are laid whether drone or worker, and the different kinds of food and treatment they receive from the workers in their embryo state, that make the three kinds of bees. If this theory be true, and it has many facts in its support, the queen has no knowledge of the kind of eggs she is depositing in the different cells, nor does she know what kind of bees they will produce. And yet there are facts which favor the other side of the question.

The fact that all eggs laid before fecundation produce drones only, seems to favor the Huber theory. The queen has a sting which she only uses to sting another queen. She can be handled without any more fear of being stung by her than by a drone, which has no sting. She lives four or five years, if no accident happens to her; but in the latter part of her life she ceases to be prolific, and the colony procced at once to raise another queen to take her place. This they do by building a queen cell, and if when the cell is about half

done, the queen does not lay an egg in it, they take one from a worker cell and put into it, or they build a queen cell around a worker egg in a worker cell, and by feeding the insect in its embryo state with royal food, a sort of creamy-like substance, and perhaps by some other process known only to themselves, the egg that would have become a worker, if it had remained in a worker cell, becomes a queen. The office of the queen in the hive seems to be only to lay eggs. She has no care for them after they are deposited in the cells, but all such as the workers convert into queens she is sure to destroy, unless in some way prevented, if she does not go out with a swarm before the young queen is sufficiently advanced in its cell to be regarded as a rival. She has power over her ovaries so that she she can lay eggs or not, as circumstances in the hive make it necessary or not. A queen in a large colony, when honey is being brought in abundantly, will lay five times the eggs that the same queen would in a small colony under reverse circumstances.

One other mysterious fact I would name here, is that the egg from which a queen is reared is hatched into a perfect bee in sixteen or seventeen days from the time it was laid, whereas if a worker had been reared from that egg, it would have taken twenty-one or twenty-two days. The different food and treatment the queen grub receives not only alters the gender of the bee, its shape and size, but also makes a difference of four or five days in hatching. The drone is the male bee and has no sting, no means of gathering honey, nor of secreting wax, nor of doing any kind of work for the common good of the colony. Like some in human society, they are non-producers, living by others' toil and industry, regular gentlemen loafers. Their only use is to fecundate the queen, and keep up by their presence in the hive the necessary animal heat to rear the brood. They live one Summer and are killed off in the Fall.

The workers are imperfectly developed females, and they do all the work that is done in the hive. They secrete the wax from their own bodies, and build it into comb; they gather the pollen for the young and the honey for all; they feed and rear the brood; they fight all the battles necessary to defend the colony against harm. They live but a few months when the weather is such that they cannot go out. They have eyes by which they can see in daylight, but all their mysterious work in the hive, which has surpassed the skill of all mechanics, and excited the wonder of all naturalists, is done in perfect darkness, where eyes of common structure can be of no use.

A swarm of bees have established themselves on the top of a Cincinnati church steeple. What a chance for a sermon on the beatitudes, and what a hint to the congregation that they should humble be!

A Gardener's Lesson.

Two gardeners had their crops of peas killed by the frost. One of them was very impatient under the loss, and fretted about it very much. The other went patiently to work at once to plant a new crop. After a while the impatient, fretting man went to his neighbor. To his surprise he found another crop of peas growing finely. He wondered how this could be.

"These are what I sowed while you were fretting," said his neighbor.

"But don't you ever fret?" he asked.

"Yes, I do; but I put it off until I have repaired the mischief that may have been done."

"Why, then you have no need to fret at all."

"True," said the friend, "and that is the reason I put it off."

Some men, like flowers, are fitter for a corner than a full light.—*Seneca.*

Floricultural.

Ferns as Window Plants.

Few plants require less attention and yet give more satisfaction to dwellers in towns than do the hardier descriptions of ferns. From the fact that many of them are greenest and best in Winter, when other plants are out of bloom, their culture ought to be patronized by the poorer classes who cannot afford more expensive plants. Among the limestone formations of North Lancashire the fern commonly known as Stag's-head is very numerous and luxuriant. The beautiful green fronds grow to a length of twelve to eighteen inches, and many of them, when cultivated in pots, fork so as to be rare and beautiful ferns, the tips of the fronds forming into a bunch. I would call the attention of city horticulturists to the fact that these ferns might be gathered at a very trifling expense and sent to town by wagon loads, seeing that the hedges are full of them in the district named. Arrived in the cities, they may be potted, and a good profit realized from the sale at from 9d. to 1s. per pot. They will live for many years, and would form a "thing of joy" in many humble homes, to the dwellers in which the sight of a green leaf is a pleasure. The beautiful little Maidenhair, Royal, Parsley and other ferns are equally common in the district.—*London Field.*

There are several varieties of fine ferns in California that can be easily transferred from the wild glens to the sitting-rooms of our people. They will grow with moss in hanging baskets or in pots. The best thing is a stand, such as is described in the following article, only a plant stand for ferns should be covered with a glass case to grow ferns in full perfection. A simple frame can be made to hold the glass frames.

A Plant Stand.—The lack of a desirable place to keep plants often prevents the pleasure of raising them. They must have light, and air, and sunshine, and it is not always convenient to devote the brightest windows to their occupancy. If kept on the ledges, they are in danger of being chilled on a frosty night; and it is a tax to be compelled to move the heavy pots every time the thermometer drops. A flower stand of some sort that can be readily moved from window to window is, therefore, a necessity. The old-fashioned wooden ones are clumsy, heavy, and take up too much room. The modern wire frames are pretty and light; but one of moderate size costs ten or twelve dollars, which is a great deal to put in the stand when we wish to put it in the flowers.

We saw something, the other day, that seemed to serve both economy and convenience. A box three feet long, a foot and a half wide across the bottom, and eighteen inches deep; is made of common pine. The sides flare outward, so that, at the top, they measure six or eight inches more, from edge to edge, than at the bottom. The box stands on four legs with casters, and under the bottom of the box, a piece of wood fancifully cut on the edge (a sort of pine valance), holds the legs firmly and firmly and symmetrically together. The top of the box is nearly even with the window-sill, and when the whole is constructed, it may either be painted in colors or stained dark-brown, to match the furniture wood. The inside of the box is better preserved from decay, if lined with zinc or tin; but it will last one, possibly two seasons, without any lining at all. Over the bottom is spread a three-inch layer of bits of broken flower pots, and on this is set a double row of pots, or as many as will stand evenly on the surface. Then a thick layer of sand is poured over the broken pieces, and the rest of the space filled up with earth till it is even with the top of the flower pots. In the bed thus formed, bulbs or slips are planted between the pots, and vines are started at the corners. When the latter are well under way, wires, on which the vines twist, are fastened diagonally from corner to corner, forming a beautiful green arch over what seems to be a bed taken thus bodily from the garden. Sometimes a tiny hanging basket, or an ivy growing in water, is hung from where the wires cross in the arch, but, even without it, there is no appearance of barrenness. A carpenter will make the box for two dollars and a half, and the rest, painting and all, can be readily done at home.—*Ex.*

Soil for Floriculture.—Most flowers, if not all, succeed best in sandy loam, made rich by the addition of well-rotted manure, which should be thoroughly mixed with the soil. Such a soil, thus prepared, will not become hard or baked, but will become loose and porous. It will not only afford the small and tender plants a chance for existence, but it will also enable them to perfect themselves with vigor and beauty. If your garden is composed of a stiff, heavy soil, a good dressing of sand and manure will assist it wonderfully in the way of plant development; and some of the most delicate plants, that would not succeed at all in such soil, in its unimproved condition, will, after such preparation, flourish in the most satisfactory manner.

Sand and Water for Cuttings.—The *Revu Horticole* recommends the following mode of striking the cuttings of soft-wooded plants: Take a flower pot saucer, fill it with river sand, and place the cutting in the same, having first saturated the whole with water. The saucers are put in a sunny place, and always kept full to the brim with water. Almost any kind of cutting will grow then.

This method of striking delicate cuttings is the best we know of, and is practiced by gardeners in California. Any kind of a saucer or deep plate will do to use.

Salt as Manure.

Various experiments have been made by M. Peligot and others in Europe to test the value of salt as a manure. The following summing up seems to have been arrived at:

Salt should never be applied other than in a pulverized state, and never be employed on impervious, cold and humid soils. The best manner to use it is to combine it with other manures, a dose of 200 weight to the acre being sufficient. When to destroy insects it should be applied before sunrise. In the case of cereals, salt strengthens the stems and causes the ears to fill better, and favors the dissolution and assimilation of the phosphates and silicates. It acts vigorously on potatoes; it can be detected in their ashes to the extent of one-half of one per cent. Asparagus is a veritable glutton in the presence of salt. A dose of 300 pounds per acre acts without fail on beets, injuring its value for sugar purposes but enhancing it for the feeding of cattle. Colza has as marked a predilection for salt as asparagus, and in Holland, where the culture of peas is so extensive, salt is something like a necessity. Mixed with hay in the proportion of a quarter of a pound to a hundred weight, the fodder is rendered more appetizing; but the best way to feed it to animals is to allow them to enjoy it in the shape of rock salt. It is calculated that a horse appropriates daily one-tenth of an ounce of salt, an ox one-half that quantity, and a sheep and a pig one-half that required by an ox.

A man in Stark county, Ind., pays his boy ten cents a quart for potato bugs, and the boy says if next year is as good as this he can buy the old man out.

Porcine.

Wheat and Vegetables for Hogs.

A FARMER in Tennessee writing to the *Rural Sun* tells how a neighbor fattened his hogs on *wheat* with turnips. Any other vegetable with wheat would do as well as turnips, which are less nutritive than mangle wurtzels and other beets, which will grow in California better than turnips will, and with greater profits for feed.

Beets sown on good soil in February or the latter part of January on the dry lands in California will, by the advantage of an early start and fair growth before the end of the rainy season, make a good crop where wheat or barley will grow without irrigation. Any farmer that can grow wheat can grow beets, and wheat and beets together are as good as wheat and turnips.

We venture the assertion that wheat is the best single grain to fatten hogs on that grows, and also that there is no branch of farming that will pay better in this State, where not one-sixth of the pork used is produced, than raising and fattening hogs.

Our soils are prolific, and with proper management can be made to produce as much solid hog-feed to the acre as the corn lands of Missouri, in wheat, peas and barley, and beets and squashes.

We extract from the letter in the *Rural Sun*, and hope our farmers may be instructed to their good:

FAT HOGS—TURNIPS AND GROUND WHEAT. Col. Boyd of Marshall county failed in his corn crop this year, and is fattening his hogs on turnips and wheat. He cuts up the turnips and tops, to which he adds one bushel of ground wheat for each twenty hogs, as the daily rations, the turnips in quantity as much as they will eat. The mixture is thoroughly cooked and fed cool, on which he thinks he can make his hogs *as fat in sixty days as he could on corn in ninety*. He has never known hogs to fatten as rapidly when fed on corn or any thing else. To feed twenty hogs ninety days, the usual time, would require at least fifteen bushels of corn each, or *three hundred bushels* for the twenty. Col. Boyd, to reach the same results, would feed sixty days and consume *sixty bushels* of wheat, added to a full supply of turnips, which are of but comparative little value. You see in fattening twenty hogs, a *clean saving of two hundred and forty bushels of grain* by Col. Boyd's mode of feeding turnips and *wheat*.

FEEDING SWINE.—One of the important things in feeding hogs, and indeed all animals, is to feed regularly. They have no clocks, and are not supposed to observe the sun and stars very closely, still hogs are not ignorant of the flight of time, and they reckon very accurately as to the hours for meals. If accustomed to be fed at six o'clock in the morning, twelve at noon, and six at night, they want their food pretty promptly at these hours, and will grunt and grumble if they don't have it. This grumbling must be avoided, for it wears off more flesh from men and hogs than is commonly supposed. We have been amused on going into hog pens, when the hogs are fed regularly, to notice how little attention they pay to visitors at any time except meal hours. They sleep right on, and it sometimes requires some hard pokes to arouse them, and when aroused they are as apt to make for the door as the trough. On the other hand, hogs fed irregularly are on the *qui vive* to see if somebody has not brought them something good to eat. Hogs are creatures of habit, and they may be accustomed to two or three, or half a dozen meals a day. We should certainly prefer three to half a dozen. Feeding them every time we pass the hog pen, as is the custom of some, is a weariness to the flesh of both man and beast.

QUALITY IN PORK.—We all know what a difference there is in pork. Breed has something to do in this matter, but not so much as many suppose. It is the kind of feed that makes the quality in pork. Use milk or whey largely and your pork is sure to be soft, flabby, and will fry away at least half. What is left is not relishable. Hence our dairy pork is our poorest pork, varying according to the amount of grain that is fed. So still-fed pork is in bad repute. Miscellaneous feed makes ordinary pork, often quite ordinary. Slop will not do, there seems to be too much water.

The grains are what is wanted to make good, sweet pork—pork that is solid and will fry well. Rank pork is unendurable, and yet there is much of it, and some people like it, like the pork from large, strong hogs.

A dirty, offensive sty is an element, no doubt, of producing strong and even fœtid pork.

Have clean quarters, a clean animal, good ventilation and feed grain. For drink, give cold, not in any way foul, water. Do not house too closely, nor feed too sharply; look to the convenience of the hog, and fat him so that he is in good condition.

A HOG in Dubuque slipped up stairs into a house where a party was being held, and got into the room where the eatables were stored, which he proceeded to devour. The *Telegraph* says the hog was chased until he was caught, but the delicacies he had eaten could not be recovered. This is the strange part of the affair.

Pisciculture.

Care of Gold Fish.

WILL some of your readers answer the following questions: What is the average life of gold fish? Should the aquarium be set in the sun or in the shade? Do they need hard or soft water? Do they need to be fed daily? If so, what is the best food? M. B.

Seth Green is reported to have given the following directions for the management of gold fish: Use any well, creek or river water that is not impregnated with mineral. Change the water when the fish come to the top and stay there, and breathe part water and part air. Take out nearly all the water, leaving enough for the fish to swim in, and fill the vessel with fresh water. Never take the fish in your hand. If the aquarium needs cleaning, make a net of mosquito netting, and take the fish out in it. There are many gold fish killed by handling. Keep your aquarium clean, so that the water looks as clear as crystal. Watch the fish a little, and you will find out when they are all right. Feed them all they will eat and anything they will eat, meat, worms, fish wafer, or fish spawn. Take great care that you take all that they do not eat out of the aquarium. Any decayed meat or vegetable in the water has the same smell to fish that it has to you in the air. If your gold fish die, it is attributable, as a rule, to one of three causes—handling, starvation, or bad water.—*Rural New Yorker.*

THERE is something very sensible in the impromptu remark of a young lady: "If our Maker thought it wrong for Adam to remain single when there was no woman on earth, how criminally wrong are the old bachelors, with the world full of pretty girls."

The Greatest Crop in the World.

A question widely discussed involves the relative value of the wheat, cotton, tea and hay crops of the world. Which of these produces employs the greatest amount of the world's capital? It is said that hay leads the rest, and the items that enter into the account as stated are somewhat startling, and will make a Granger's hair stand on end. Cotton and tea are local crops, while hay is produced everywhere the world over, and thus the hay crop greatly out-weighs either of the other two. The aggregate reported value of all farm products in the United States, for 1870, was $2,447,538,658; but as this includes additions to stock, "betterments," etc., it is probably too high. Now, the hay crop for that year—that is, the grass dried and cured for use or sale—is reported at over 27,000,000 tons. This, at half the selling price in the large cities, would amount to $405,000,000, and is far greater than the aggregate home value of the cotton crop or any other crop. But the cured "hay" is but a portion of the grass crop. The other portion is used on the ground, and it requires considerable calculation to get at the value so used, even in the roughest way. In the first place, live stock, including horned cattle, horses, sheep, swine, etc., to the value of $1,525,000,000, were fed from it that year. Averaging the lives of these at five years, we have one-fifth of that sum as representing the grass fed to them in 1870, viz: $305,000,000; next we find the value of the animals slaughtered for food in that year to be $309,000,000, and as this is an annual product, the whole of it will, for the present, be credited to the grass crop; next we find that the butter crop of 1870 was 514,000,000 pounds, which, at the low average of 25 cents, amounts to $128,000,000, and this goes to the credit of grass; next we have 235,000,000 gallons of milk, which averaged at the low estimate of 10 cents per gallon, adds $25,000,000 more to the credit of the grass crop; then we have 100,000,000 pounds of wool at 25 cents per pound, adding $25,000,000 more; and, finally, 53,000,000 pounds of cheese, at 10 cents, adding over $5,000,000 to the total credits to the grass crop of 1870, which aggregates $887,000,000. Now, let us add the value of the "hay" crop as given above, viz.: $405,000,000, and we have a grand total for "hay" and the products of grass consumed on the ground of $1,292,000,000! This is, of course, subject to deduction, as the meat, butter, milk, cheese, and wool-producing animals consume other food besides grass and hay. To make ample allowance for this, we deduct the entire value of the corn and oat crops of 1870, estimated at $270,000,000, and this leaves a remainder of $1,682,000,000 to be credited to the hay and grass crop of that year, when the reported aggregate of all farm products was $2,447,528,658. If our estimates make even the roughest approach to accuracy, the value of that crop was two-fifths of the aggregate value of all farm products, and hence we may infer that two-fifths of the capital then invested in agricultural pursuits was devoted to the grass crop, and this, in the United States, equals (in round numbers) $4,575,000,000! From these figures the deduction is palpable that King Cotton is uncrowned and dethroned, and we may be forced to admit that all "flesh" and all else is hay, if not "grass."—*Hay, Straw and Grain Reporter.*

WASHING WINDOWS.—In washing windows or other glass, never use soap unless it can be thoroughly rinsed off; wash off the dirt in clean warm water; after the glass is dry, rub with a little paste or whiting and water, in the center of each pane. With another cloth rinse over the glass, then rub with a dry cloth till it shines like crystal.

The Sheep Herd.

Combing Wools.

THE following, by a correspondent of the *Rural New Yorker*, contains some practical suggestions that are worthy the consideration of California wool-growers:

Occasionally there comes into the Custom House Appraiser's office, from Australia, some combing wool of a much finer grade than the ordinary combing wool from the English blood sheep. I judge that it must be from a cross between the English long wool breeds, either Cotswold or Leicester, and the Merino of that section. The wool is very much sought after by those engaged in the worsted branches of manufacture, like delaines, shawls and various stuff goods; and as that branch is constantly extending there is not likely to be diminution of the demand for wools suited to that industry. Would it not greatly aid the sheep husbandry of the country if we were to diversify our breeds of sheep, and adapt them more to the demands of a rapid change in manufacturing industries. The improvements in machinery, and in taste and fashion, have wrought a wonderful change in the public mind relative to worsted goods. A careful examination of people's clothing satisfies me that at least nine-tenths of the textile fabrics worn by either sex are the product of the worsted manufacturers. When we know how worsted manufacture facilitates the mixture of other and cheaper material with wool, constantly cheapening the production, we need not be surprised at the rapid extension of the industry.

As at present conducted American sheep husbandry is of little aid to the home manufacturer in the great leading industries of the world. England is the great producer, as she is the great consumer, of worsted wools, and hence she monopolizes the markets of the world in the various worsted fabrics through the facilities for obtaining cheap raw material. "The rapid increase of the worsted manufacture as compared with the woolen is no doubt to be ascribed to the greater simplicity of the processes and to the recent introduction of combing machines, but most of all, to the introduction of cotton warps in 1835, which not only cheapened the goods but vastly increased the variety."

We can produce cheap cotton. Ought we not to so vary our production of wool as to place within the reach of the manufacturer cheap wool, and thereby successfully compete for the markets of the world in textile fabrics? If we will adapt our sheep husbandry more to the English system of making meat, and not wool, the great object, and choose those breeds which are so valuable for mutton as well as for combing wools, we can, on our cheap lands, and with our universal good market for meat, grow wool much cheaper than it can be produced in England and largely extend our manufacturing and cognate industries.

Going more into detail, it seems to me a capital crop may be made upon our grade Merinos by judiciously selected South Down males, and in certain sections, like the Vine Grass regions of the South, with the long wool varieties, enhancing the business profits by the increased income both in his wool and meat. For it is not to be disguised that good combing wool, whether from South Downs or Cotswolds, is worth much more in the markets than the fine clothing wool of the Merino, while the increased weight adds largely to the profits in the carcass.

EVERY FARMER SHOULD BE A SHEEP-GROWER.—There are many reasons why every farmer should keep a small number of fine-wool sheep on the farm. By raising his own mutton a large saving is made in the butcher bill; the sale of the wool will always bring ready money. Besides these reasons there are many others. Sheep are the best scavengers that can be kept on a place, and in two years' pasturing on a foul piece of ground will destroy the weeds that will defy any other method to exterminate. Weeds are the greatest absorbents of moisture we have, and where they grow among other crops soon deprive the plants of all moisture, when they wither and die. When sheep husbandry shall become in this State a part of the farm operations, we will have a much higher standard in the quality of wool produced than under the present system. When breeding on a small scale, the farmer will have time to cull out worthless stock and breed only those that are known to be good. All thoroughbreds, of whatever stock, do not produce good animals, and in breeding this fact must be remembered. Where there is a herd of a thousand or so it is impossible to pair the males and female so as to produce good offspring. Every year we are gaining ground in the matter of raising fine stock; but until every farmer is a stock raiser we shall not have reached the point of perfection. Every farmer should be a wool-producer, a dairyman, a hog-raiser, and a stock-drover on a small scale. It is much easier to drive hay to market when it has legs under it than to bale it and ship on the cars. We do not advocate the feeding of wheat to beef cattle or hogs, but we do hold that the wheat should be sent to mill by the producer, and the bran and shorts retained and fed to stock and converted into pork, beef, butter and cheese. And there are other products more profitable than wheat which it will pay to feed stock.

The foregoing, from the *Sacramento Valley Agriculturist*, contains much hard sense pertinent to the question. We differ only in one thing: we *do* believe in, and advocate feeding wheat to stock, in localities long distances from market. There is no better feed for hogs and chickens, and it is economy to convert wheat into pork, beef, mutton, etc., where it grows luxuriantly and the price it commands is below $1\frac{1}{4}$ cents per pound.

WHY JOHNSON'S COTSWOLD RAM DID N'T TAKE THE PRIZE.—MAX ADELER writes to the *Danbury News* thus:

Our county fair is just over, but Johnson's Cotswold ram did not take the prize that was offered for the best animal of that kind. Judge Pittman was Chairman of the Committee on Rams, and he manifested the deepest interest in Johnson's ram, indicating clearly that if any sheep ought to take a prize that one certainly ought to. Johnson's ram was by itself in a pen with a high board fence, and before adjudicating the prizes the Judge thought he had better go in and make a close examination of the animal for the purpose of ascertaining the fineness of its wool, etc.

As soon as the Judge reached the interior he walked towards the ram, whereupon the ram lowered his head and began to shake it ominously. Just as the Judge was about to feel the fleece the ram leaped forward and planted his head in the Judge's stomach, rolling him over on the ground. Before the Judge had time to realize what had happened the ram came at him again and began a series of promiscuous butts, each given with the precision and force of a pile-driver. It butted the Judge on the back, on the ribs, on his arm, and on his shoulder-blades, on the bald place on his head, on his breast, on his shins; it butted his nose, it butted his watch into a mass of loose cog wheels, it butted his spectacles off, it butted his hat into black silk chaos; it butted him over into the corner and up against the fence, butted down another of the committee, butted three small boys into fits, butted the money taker at the gate, and then fled out into the country, butting harmlessly at the fresh air.

The Judge did not distribute the prizes that day. When they collected him from various parts of the pen, they wiped the mud from his trousers and the blood from his nose, and sent him home with a perennial stomach-ache and a determination to start after that wandering mutton, the first thing in the morning, with a shotgun.

WE were amused, says the Colorado *Chieftain*, at the novel and ingenious manner of corralling a flock of thirteen hundred sheep. It consisted of bunching them together and running a canvass fence around them. The canvass was fastened between two small stakes, each pair set about ten feet apart. The canvass is about two feet in width, and the lower edge is calculated to be about eight or ten inches from the ground. The stakes extend so far below the canvass as to allow of their being set far enough in the ground to keep it in upright position. Like a fish-net it can be taken down, rolled up and put away in the wagon. It is certainly a very convenient way of corralling sheep of nights while driving long journeys. They may be made to hold two or three thousand in a bunch. This novel fence was invented by A. S. McWilliams, of Colusa county, California.

When to Sell Wheat.

If farmers could always know with accuracy just the amount of old grain and flour left over, and the true condition of the crops all over the world, so that they might be able to judge of the ratio of supply to demand, they would be prepared to decide whether the early market is what it ought to be or not; but so long as there are grain speculators all over the world trying to bear the market by exaggerated statements of the amount of the old crop left over in the great grain centres of the world, and with over-estimates of the new crop, they are left without a reliable guide.

There was a time when speculators were able to subsidize almost the entire press, and procure such crop statements as should suit their own interests and mislead the farmers, but the time for that, we trust, is rapidly passing by, and the time rapidly approaching when the intelligent farmer shall be quite as well informed upon the prospective condition of crops and markets any other class. When the farmer shall have become thoroughly informed upon all questions liable to affect the prices, he will be a great deal better prepared to decide when to sell his crops than he has been or is now.

Perhaps we may lay it down as a general rule, that when the last year's crop has been, generally, a short one, and the present one is abundant, the early market will be the best; but when the last one was abundant, and the current one is short, the latter markets will higher.

THE possession of vast tracts of land by one man, or the ownership of sufficient area to make a county, if not a good-sized state, when vested in two or three men, precludes the possibility of small farms ever being reached. Yet this is the situation in California to-day, and instead of being remedied, is constantly increasing, and the degradation consequent upon this condition of things is sure to follow. It has been generally admitted that the crying sin of other countries has been the system of tenant farming, which causes the utter helplessness of the real cultivator of the soil against the nominal owner thereof; and yet we are fastening this same system here.

THE irrigation statutes of the Territory of Colorado were borrowed from the adjoining Territory of New Mexico. New Mexico received them from the old empire of Mexico. Mexico, as a Spanish province, got them from the mother country, Spain, where they had long been digested and matured by the Moorish law-givers, and the Moors by the southern borders of the Mediterranean, had long centuries before brought them from Egypt.

The Horse.

Shall We Encourage Walking Horses?

It is hardly possible to take up a journal during the Summer and Autumn, without seeing either items or extended accounts of what horses have accomplished in trotting or running. We scarcely ever see accounts of their endurance in hauling loads at a given pace, or the number of miles they have accomplished in a given number of hours at a walking gait; and yet this practice is of far more importance than their endurance at speed.

Agricultural fair managers, who might not inaptly be called "Agricultural horse-trot managers," advertise widely the large amount devoted as premiums for trotting and running, but not a word as to horses exhibiting the greatest endurance and speed at a walking gait. Why not? "Oh, it will not draw the crowd." Very well; if agricultural fairs are simply intended to draw that class of humanity whose end and aim in life is trotting and running horses, and betting thereon, well and good.

These is, however, now and then an individual who, while he admires the noble animal at speed, very well knows that this eternal pandering to mere speed is not only vitiating the taste of the public, but is also tending to breed out other valuable traits that can ill be spared.

A good walking horse should make, at that gait, an average of four miles an hour. How many can do it? Very few. Why so? The walking gait has ceased to be cultivated.

By the careful training of ambitious and active horses, they may be made to walk five miles an hour as easily as the ordinary horse now walks three. There is no reason why an average pace of four miles an hour should not be kept up with ordinary loads throughout the day. In the day's travel, this would make a gain of ten miles, and the trained would have accomplished forty miles against the thirty for the untrained one, and this just as easily to the horse of spirit as to the one with the slower gait. If the horse has not mechanical structure for this gait, of course he cannot do it. Having it, it may be brought out just as easily as a trotting or running gait; and if premiums were given for this purpose at our agricultural fairs, it would be found that individual horses would be able to make, not only five miles an hour, but some of them six. The naturally fast walker, when trained, will even do a given amount of work at the increased pace easier than at the slow pace. This we know from experience.

The energy displayed among all classes of breeders has been directed constantly to reduce and degrade the walking gait, and as a consequence, we find, each year, fewer and fewer fast walking horses. This spirit has pervaded our fair rings until now it is difficult to find a premium offered for the fastest walking horse. In looking over the premium lists received by us for 1874, embracing nearly all the Western States, we find only two premiums offered for walking horses, one by the Kansas City, Missouri, Industrial Exposition, and the other by Northeastern Iowa Agricultural Society. We are glad to be able to chronicle these two, and hope that the number may be yearly increased until the fast walking horse shall at least be regarded on a par with other road and working horses. A great error has been made in ignoring this most valuable of all the gaits of the horse. Certainly, reform is needed in this direction. —*Western Rural.*

How to Purchase a Horse.—First. Examine the eyes in the stable, then in the light; if they are in any degree defective, reject.

2. Examine the teeth to determine the age.

3. Examine the poll, or crown of the head, and the withers, or top of the shoulders, as the former is the seat of poll evil, and the latter that of fistula.

4. Examine the front feet, and if the frog has fallen, or settled down between the heels of the shoe and the heels are contracted, reject him; as he, if not already lame, is liable to become so at any moment.

Next observe the knees and ankles of the horse you desire to purchase, and if cocked, you may be sure that it is the result of the displacement of the internal organs of the foot, a consequence of neglect of the form of the foot and injudicious shoeing.

5. Examine for interfering, from the ankle to the knees, and if it proves that he cuts the knee, or the leg between the knee and the ankle, or the latter badly, reject.

"Speedy cut" of the knee and leg are most serious in their effects.

Many trotting horses, which would be of great value were it not for this single defect, are by it rendered valueless.

6. Carefully examine the hoofs for cracks, as jockeys have acquired great skill in concealing cracks in the hoofs.

If cracks are observable in any degree, reject.

Also, both look and feel for ringbones, which are callouses on the bones of the pastern near the foot; if apparent, reject.

7. Examine the hind feet for the same defects of the foot and ankle that we have named in connection with the front feet. Then proceed to the hock, which is the seat of curb and both bone and blood spavins.

The former is a bony enlargement of the posterior and lower portion of the hock-joint; the second a bony excrescence on the lower, inner, and rather anterior portion of the hock, and the latter is a soft enlargement of the synovial membrane on the inner and upper portion of the hock. They are either of them sufficient reason for rejecting.

8. See that the horse stands with the front feet well under him, and observe both the heels of the feet and shoes, to see if he "forges" or over-reaches, and it case he does, and the toes of the front feet are low, the heels high, and the heels of the front shoes a good thickness, and the toes of the hind feet are of no proper length, reject him; for if he still over-reaches with his feet in the condition described, he is incurable. If he props out both front feet, or points them alternately, reject.

9. In testing the driving qualities, take the reins while on the ground, invite the owner to get into the vehicle first, then drive yourself. Avoid the display or the use of the whip, and if he has not sufficient spirit to exhibit his best speed without it, reject. Should he drive satisfactorily without, it will then be proper to test his amiability and the extent of his training in the use of the whip.

Thoroughly test his walking qualities first, as that gait is more important in the horse of all work than great trotting speed. The value of a horse, safe for all purposes without blinds, is greatly enhanced thereby.

10. Always purchase of the breeder of the horse, if practicable; the reasons are obvious. —*Maryland Farmer.*

Mules and Horses at the South.—Whatever may be said in favor of the horse as an agricultural laborer above the mule at the North, certain it is that the position of the Arkansas correspondent of the *American Farm Journal* is well taken, favoring the mule in Southern agriculture:

Mules, on an average, are more valuable than horses, are easier raised, are not as subject to disease, are not likely to run away in wagoning and plowing, are longer lived, will do more work, and require less feed and attention; they are stronger, will draw heavier loads and stand a great deal more hardship, and are in every way preferable to the horse for general farm use. Mules come in earlier, being ready for light work when three years old. They will then do enough work on the farm to pay for their feed, and after having attained the age of four years they are ready for any kind of service. But the horse (colt) must be kept until he is four years old before he is worked at all, and when he is four he must be a first-rate colt to bring as much as the mule will at two years old. But assume the animals are both required for farm work, see what a difference there is in favor of the mule.

The working life of the mule can be as safely estimated at thirty years as that of a horse at ten years. So while a mule is working its life out, three horses will be required to do equal service.

But these are not the only items. The saving of feed is at least one-fourth, or not less than 647 bushels of corn and 327 tons of hay. These amounts added to the original saving in purchase of animals show an advantage in favor in favor of the use of the mule over the horse of over $1,000 during the ordinary life of the animal.

The mule is less dainty about food, unground grain and dry feed being just the things for him. There are still other advantages in favor of the mule too numerous to mention in a short article like this.

Bonner as a Horse-Fancier.—The New York correspondent of the Boston *Times* says Bonner ows $250,000 worth of equine property; spends five or six hours out of every twenty-four in his stables or on the road. He loves horses, thinks horses, talks horses. Nevertheless, if he wants to drive to a neighbor's house, or to a distant part of the city in the evening, he always hires a carriage from a livery stable. Dexter and the other noble steeds are altogether too fine for ordinary employment. Bonner's bill at livery is reported to be $1,500 a year, while the interest on the value of his horses at the legal rate is $17,500 per annum. He paid $25,000 for Dexter, and was pronounced profoundly foolish therefor. He could have sold him again for $50,000, although he would not take $100,000. It is one of his idiosyncracies that he never sells anything; he is only a buyer. Of all the real estate he has purchased he has never disposed of a single foot. He keeps whatever he gets, and gets more. It is said he has made up his mind to own Goldsmith Maid; and doubtless he will do so, if the mare can be got for money. Bonner can afford to be extravagant. His entire property to-day cannot be worth less than $5,000,000; and yet it is only a few years since he was a toiling printer, delighted to earn $30 per week.

Bonner did not make his money on fast horses but on the New York *Ledger*. His fancy for horses is simply an extravagance. Where one man makes anything on race-horses ten men lose, as at other gambling, and become, in a sense, demoralized in the bargain. A horse is in reality worth only what of real service there is in him.

A Gigantic Grain Elevator.—The New York Central and Hudson River Railway Company is now building at the foot of 60th street, on the Hudson River, in New York, a grain elevator, capable of holding from 1,000,000 to 1,200,000 bushels of grain. This elevator will be used principally for storage purposes for the grain brought on in the Company's cars, and intended for transferment to sea-going vessels and canal boats.

The wealthy land owner has ever the poor tenant at a disadvantage, for the financial burdens of the Government fall mostly upon the latter, and the former manipulates Legislatures and laws in his own behalf, as his light taxation proves. It may be claimed that this evil can never be in this country, since the law of entail does not obtain here, but the system, by whatever cause produced, is the same.

Boys and Girls.

Give Us a Chance.

HERE we are! don't leave us out,
Just because we're little boys!
Though we're not so bold and stout,
In the world we make a noise.
You're a year or two ahead,
But we, step by step, advance;
All the world's before you spread—
Give the little boys a chance!

Never slight us in your play,
You were once as small as we;
We'll be big, like you, some day,
Then perhaps our power you'll see.
We will meet you, when we've grown,
With a brave and fearless glance;
Don't think all this world's your own—
Give the little boys a chance!

Little hands will soon be strong
For the work that they must do;
Little lips will sing their song
When these early days are through.
So, you big boys, if we're small,
On our toes you needn't dance;
There is room enough for all—
Give the little boys a chance.

Time Waits for No Boy.

Jack and Harry had to recite their lessons to their father every day at two o'clock, but they were thoughtless boys who liked to play and idle away the time, so very often the lessons were not ready, because they had put off studying too long. Over and over again had they been reproved, until at last they thought they would really try to be diligent and punctual. For almost a week they did pretty well, but then there came a day when the sun was so bright and warm and the air so soft that it seemed as if nothing in the world could draw them away from under the old apple tree, where they lay in the tall grass on their backs, looking up at the cool green leaves and the peeps of blue sky. There they lay and talked of all that they meant to do, and the things they wished they had, and the places they wanted to visit.

"Uncle Henry is going to send for us some day very soon," said Harry, "to go with him out to Mr. Cheesebro's farm, to stay all night and the next day. Won't it be splendid? I shall carry my fishing rod, for there are trout in the brook, and I *may* carry Ben's gun and hunt hares."

"Yes, and what good things we shall have to eat," said Jack. "There'll be mince pies and doughnuts, and roost goose and pickles, and plum pudding. Do you remember, the other time we went, how Mr. Cheesebro gave us great slices of cake between meals and filled our pockets with nuts?"

"Guess I do!" answered Harry. "I have been wanting to go again ever since. Sammy Cheesebro said next time we came he'd have a party and play old-fashioned games. Won't it be fun? I wonder what day uncle Henry is going."

"He said pretty soon," said Jack, hopefully. "Say, Harry, you know that big swing they've got out in the barn, and the high hay mows! Oh, what fun we shall have! I wish we were there now, and then we shouldn't have that awful arithmetic lesson to learn."

"That awful geography lesson, you'd better say," replied Harry. "I took a look at it before I came out here, and it's dreadful. We have to bound every country in Asia. Can you do it?"

"No, but it won't take long to learn. Say, Harry, see that fish hawk away up in the sky. wish I had a bow and arrow.

"Ho! I don't. I wish I had a rifle." said Harry, shaping his eyes to look up.

And so they planned, and dreamed, and talked, lying luxuriously in the tall nodding grass, with birds to sing over them and flowers to sweeten the air. If they had only learned their lessons first! But time flew, the hours sped by, and when at last they reluctantly arose and went into the house after their books, behold, it was one o'clock, and there was lunch waiting for them!

They stared at each other in dismay, and then, being very hungry, they began to eat their sandwiches and gingerbread, and talked over the situation between the mouthfuls.

"We never can learn it all, never!" exclaimed Harry. "There are two endless sums in practical payments to work out, and then all those countries! If we had two hours, even!"

"Tell you what," said Jack, let's set the clock back an hour! He always looks at the clock before he calls us, and he won't think nor find out about it."

Harry whistled, thought it over, and made up his mind.

"All right," he said. "We'll do it. Your's awfully sharp, Jack. Here, pull that big chair around, so I can stand in it and reach up to the hands."

It took but an instant, the clock ticked on as tranquilly as before, but now the hands pointed to twelve instead of one, and the boys had the two hours they wanted for their studies.

Away they hurried to their books, and while the quickest one worked out the long sums, the other delved at boundaries. It was hard work, but they kept at it as if they were running a race. Half an hour after their father came up the avenue, walking very fast, and almost out of breath.

"Bless me!" he said, as he looked at the clock. I thought it was a great deal later than this! So much for getting one's lunch away from home. Brown must have his as early as eleven o'clock. Well, I'm glad it's no later. I shall have time to write two or three letters before I call the boys."

And he shut himself into his library among his papers. There was quiet in the house for an hour longer, during which time the boys applied themselves almost breathlessly to their tasks. The arithmetic exercise was ready, and the boundaries were almost learned, only it seemed as if Jack never could get Siam and Anam right.

At half-past one by the clock their father came out of the library.

"Come, boys," he called loudly. "No lessons to-day! Hurry on your jackets and hats; uncle Henry wants you to go out to Mr. Cheesebro's with him, and I'm going to drive you over to the train."

How the boys sprang up and shouted, and dashed away their books. They were all ready by the time the horse was at the door. Harry had not forgotten his fishing rod, and Jack wore his trousers that had the deepest pockets. Their mother stood on the steps to see them off.

"Hurry along!" called their father from the carriage. "We've none too much time. The train starts at ten minutes past two, precisely!"

"Oh! why!" faltered Jack, and Harry stopped short, looking dumbfounded.

"What's the matter?" cried their father.

"Hurry, I tell you! We've no time whatever to lose."

"The clock is too slow!" said Harry, despairingly.

"Slow! no, it isn't. I set it by railroad time myself this morning. What do you mean?"

"We put it back a whole hour," the boys confessed, mournfully.

"What on earth did you put it back for?" exclaimed their father.

"So we could have time to learn our lessons."

Their mother looked grave and pitying. Their father jumped out of the carriage, and called the hired man to take the horse back to the barn.

"Well, my lads," he said, "come into the house, and I'll hear you recite your lessons. You've lost your chance of going out to Mr. Cheesebro's, and I think you have pretty thoroughly learned another lesson besides your geography and arithmetic. Come in."

Any young miss would rather have her corsets tight than her "feller."

Educational.

To Young Men.

WHAT are you living for? What is your aim, and what do you intend to do in this world? Have you no object, no aim, no notions of your own? We are living in an age of progression, and each is expected to act his part. A part which will be of use to the world, an honor to themselves, and a glory to our nation. Each is expected to make an effort, an effort for the good of all. Good aspirations lead on to ever increasing efforts, and indicate the grandeur of our destiny. We must have high and noble aims, and then strive to reach them. Success is sure to follow earnest, unceasing toil. It may take long years of labor, but still press on. You will be all the better for your striving. Life is a race, and many are on the course. You must either run or be trodden under foot. The multitude is moving on, you must not look behind, or defeat is certain. Young men, have an object in view, and then press on to gain the prize. "You can if you will." Will you? What if you should fail once or twice? Men are scarce that have never failed in their undertaking. You must not expect to succeed better than others. Nothing valuable is obtainable without labor. Your success will depend upon your strict adherence to your business. "As a first principle, let every transaction be of that pure and honest character that you would not be ashamed to have appear before the whole world as clearly as to yourself. It is of the highest consequence that you should not only cultivate correct principles, but that you should place your standard so high as to require great vigilance in living up to it."

The above is a quotation from Lawrence. Every young man should adopt it as a rule by which to govern his life. And to you that may read this, I would say, form a purpose of your own. Try to be something. There is a place for you, all you have to do is to find it. Aim high and you will hit something above your level. Reader, have a noble object in view, and then with all your might press forward until you reach it, and it is yours.

J. H. Funk.

Danville, Iowa, Oct. 15, 1874.

Education of Girls.—There are elements at work at both ends of the system of female education, that are destined to achieve great results for women. One is the school of Natural History at Pennikese Island, at which more than half the pupils are female teachers, and the other is the establishment and gradual spread of *kindergarten* schools for the nurselings. Undoubtedly the opening of colleges to women and the co-education of the sexes is another element not less potent in its effects. The aptitude of women for patient investigations, for mathematical calculations in which time and accuracy rather than boldness and originality enter, her delicate touch, her quick perception—all these eminently fit her for excellence in various departments of natural and mathematical science. Education and training is all she needs to open wide to her many fields of useful labor hitherto occupied almost entirely by men.

So long as boys and girls, men and women live in the same family, we must believe in co-education within certain limits. The basis of friendship is sympathy, and the greater the sources whence that sympathy flows, the stronger and more enduring will be the friendship. Love is friendship sublimated—we do not refer to that passion of quick growth and decline which springs from physical contrasts of temperment, but that which has its seat in reason is judicious, and by consequence grows mightier and more absorbing as youth departs and autumnal ripeness clothes the intellect and the heart with those qualities that command honor and veneration. So we would have the boys and girls study substantially

the same text books, varying them according to their natural aptitudes, both alike being held to a high standard of scholarship. Thus will girls be fitted for marriage to intelligent men, with whom they may realize all those delights and advantages which spring from the purest friendship and the warmest love. Thus may they be qualified to be the mothers and teachers of a race of superior men and women. Thus may they enjoy, as they pass through life, the infinite provisions everywhere around them for culture and for happiness.

The lives of many women in so-called easy circumstances are perfectly pitiful. Lacking early and liberal culture, they are easily fettered by the dull routine of household and nursery duties, from which it is almost impossible that they should lift themselves, or be lifted by their husband or anybody else. Had they once swept on free and easy wing through the heaven of high literature of art or of science, a new book, fine picture, a fresh discovery, would be as an open door from their cage, through which for a brief space they could fly to the upper realms of thought and enjoyment, and leave dull care behind. With what freshness and spirit would they return to their duty again!

It is true that certain plants flourish best in certain soils, but in compounding the soil of our flower beds, we take it for granted that though a dozen different varieties of seed are planted in the same bed, each will appropriate to itself only those elements suited to its growth. Our care is that what each needs shall not be wanting, and we trust to the instinct of the plant to reject that which is hurtful.

In like manner we would have our daughters possess every advantage for the most varied and liberal culture, trusting that healthful and normal natures will appropriate those elements suited to their various idiosyncracies and reject everything that ministers to irregular and abnormal growth.—*The Science of Health.*

Farmers cannot occupy a little spare time better, or more profitably, than in reviewing their operations during the last year. Every year has its lessons, and experience is the best of instructors for those who have ears to hear. It is true that the interferences of a Higher Power are more perceptibly felt and have more immediate effects in the profession of the farmer than in any other. Rain and drouth, cold and heat, insects and blight, storm and sunshine, bring with them their blessings and their calamities; and these come alike on all. The farmer cannot feel responsible for a "bad year." But he can look back and see where he has failed, either in the exercise of his industry or his judgment, and lay a lessor for the year upon which he has just entered, and this retrospect with a view to correct errors in the future is a characteristic of all successful farmers.

A Royal Marriage.—When two young people start out in life together with nothing but a determination to succeed, avoiding the invasion of each other's idiosyncrasies, not carrying the candle near the gunpowder, but sympathetic with each other's employment, willing to live on small means till they get large facilities, paying as they go, taking life here as a discipline, with four eyes watching its pearls, and four hands fighting its battles —whatever others may say or do, that is a royal marriage. It is so set down in the heavenly archives, and the orange blossoms shall wither on neither side the grave.

Parasites.—It is common to note that each species of animal has its own parasites, which can exist only upon creatures which have more or less kinship with their host. Thus the *oscaris mystax*, which torments the domestic cat, is found in all species of *felis*, while the fox, so closely resembling the wolf or the dog, is never troubled with the *tænia serata*, common in the last mentioned animal.

Correspondence.

NOTES OF TRAVEL.

BY MRS. C. F. YOUNG, M. D.

THIS sixteenth day of November, in Contra Costa county, the hills are delicately tinged with the green of Spring grasses. The summer-fallowed ground contrasts finely with tints of color that are at this hour reflected on the clouds—not in pink, or blue, or amber, but a combination of all, by degrees softly shading down to the sky line of a rosy sunset, and purple mists suggestive of tropical lands not far away. Indeed, within ten miles, to-day, one can find the

ORANGE, LEMON AND BANANNA

growing in the open air. A profusion of flowers that, east of the Rocky Mountains, would be found only in the conservatories of the wealthy, or the hot-houses of professional gardeners, bud and bloom on the porches and by the garden walks of this workingman's home, receiving only the modicum of care given by children and a feeble woman. Meadow larks have filled the whole day, since earliest dawn, with music. A pair of them are now gathering supper under a rose tree within twenty feet of our open window.

Yesterday we passed over thirty miles of country roads. We saw many fields of early sown summer-fallowed and volunteer wheat evenly seeded and growing finely. People were sowing grain, others looking after the squirrels, many others rushing ahead with the plowing—gang plows, two, four, and six-horse. Query: Why cannot women and girls manage gang plows, and put in grain, thus learning how to enter into the care and daily hopes of the farmer, as well as the profits of the crop? One of the prettiest fields of oats we have ever seen was put in by a fourteen-year-old girl—plowing, seeding, reaping, and taking care of the team also. A sulky plow and improved machinery, and hearty encouragement, were hers. She could make bread and sew nicely; sing and play sacred music. Did it hurt her to know how to manage a crop or have an interest in the details of farm work?

THE CONTRAST.

We have seen this week a father at work in the mines while one hundred and sixty acres of hill and interval lands and two acres of orchard were neglected. The daughter, in this case, is in the city seeking work; her husband, intemperate; her mother, pining over "the might have beens" and hoping the "Lord will next time give her daughter a good husband." Chickens were in the house; old rags about the door-step; the hay not stacked or sheltered. Depend upon it, the self-respecting, tired, ambitious women are best help-meets and housekeepers.

Walking through the garden we asked, "Can you not prune these young trees?"

"No," they scornfully replied; "we think women's work is in the house. We are not the strong-minded kind!"

Verily not, and no prospect of any strength of character being imparted to the children born in the house.

The cows were yet in the coral, hungry and thin. "We only strip them a little for the children. It's cheaper to buy than to make butter."

We thought we could see how milk and butter and fruit, with a wind-mill to lift water to irrigate one acre of garden, might be made to yield a good living, and how, little by little, acres of nut-bearing trees might grow to productiveness and beauty. Oranges and lemons were possible—as possible on the sheltered side of the Diablo hills as in any part of the State, and even one tree would add very much to the beauty of the home life.

"Did you dry any fruit?" we asked, "or can any?"

"Oh, no. It don't pay to do such drudgery when we can buy it so cheap."

This is the rock upon which so many California people break up. "Many a little makes a mickle," say the Scotch people. It's equally true that dimes make dollars. A pound of apples dried nicely for winter use saves twelve and a half cents at least, besides the time and shoe leather required to go after them. The home-made article can be free from cores and skins: the store article may have both. Bowls of grape jam—made with only one pound of sugar to the pound—might have been prepared (fifty for every family of four), delicious and healthful, from fruit that to-day is rotting on the vines. The fact is, dear reader,

IT DOES NOT PAY

to buy anything that you can make or save at home in time and materials that otherwise would be wasted.

Then, there are whole reefs of rocks on which to be shipwreck in the trifling story papers—"given away if you will buy the flashy cheap chromos." Morning, noon and night some one may be seen reading the exciting continued tales of impossible heroes and heroines. Wherever this habit is formed, and becomes a passion, plows and harrows are rusting, chickens roosting over the harness, the stock is neglected, fences down, weeds abounding, trees and vines scragly from neglect, and the house, inside and ont, in a worse condition. These people are dyspeptics in brain as well as stomachs. Exciting food and unnatural stories please best. They do not relish simple bread and baked apples, nor pleasant and instructive farm journals. Infinitely better for all parties to rise early and work late; to scrub floors, and pull weeds, and by hand, pare apples to dry. Better even to walk five miles with a basket of eggs to sell, than to fret and whine and dawdle over a sickly story or a flashing fashion plate. The first brings self-respect and propriety: the last, discontent and ruin.

The Scotch and Welsh people, who commence very small, working by the day, in a few years, have snug and thrifty homes. Our countrymen and women, in too many instances, by their dislike of plain work, and their foolish desire to be fashionable, sink away from broad, fertile acres and the possibilities of beautiful homes, and then blame capital and Providence.

To help correct this false pride, let each reader of the Agriculturist try to persuade one other person to subscribe for and read a copy each month of the glad new year. Edited by a workingman, who, with his wife, has solved the problem of making home attractive and beautiful with only the materials within the reach of the humblest toiler, certainly, in the coming year, many lessons can be given to assist those who wish to learn and are willing to try to improve their homes and their hearts.

When a man owns the land upon which the labor of his life is expended, and which he expects to leave as a legacy to his children, his interest in the political affairs of the nation must be vastly greater than when no sense of responsibility exists, and when a system which tends to weaken the citizen's interest in the affairs of state threatens, it is time to meet it with determined resistance.

Bashfulness is often like the plaiting on spoons—when it wears off it shows the brass.

Cleaning a Field From Thistles With Sheep.

Mr. Hawkins and Mr. Broughton, of Solano county, live near together. They each have a hundred acre field adjoining. The soil is alike. Year after year these fields have been sown in wheat until the average crop was not more than fifteen or twenty bushels to the acre; beside this the little thistle, or nettle as some call it, had almost taken possession of them. During the month of February last year, Mr. Hawkins put 600 sheep on his and let them remain until August. In the meantime they ate up every particle of vegetation and trampled the whole field into a perfect dust bed. Yet when they were taken off they were perfectly fat. Last winter it was put in wheat, and when harvested produced fifty-eight bushels to the acre, the whole being perfectly free from thistles, while Mr. Broughton got only fifteen from his, and any amount of thistles. May not farmers learn a lesson from this? This land did not lie profitless as fallow ground does, but the sheep were a source of revenue. While they enriched the soil they cleared it of weeds and prepared it for a more abundant yield.—*Sonoma Democrat.*

A Model Republic.

The little Republic of Switzerland, perched among the Alps, is the pattern Republic of the world. Its population consists of 2,400,000 souls, and there are 485,000 households of families. Of the heads of these families 405,000 possess landed property, so that the whole of the real estate of the Republic may be said to be distributed among the whole of its people. The exports of the country amount to $58,000,000, and the rate of pauperism is the lowest in Europe. Taxes are nominal, officers' salaries low, defalcation and civic corruption are unknown, and the offices (local and federal) go a begging. Such are a few of the effects of the extensive diffusion of property, and nearly equal pay for service public and private.

Advancing and Retreating Races.

As the wild man retreats, so the wolf who shared the forest with him is forced to yield to the prowess of the dog, that companion of the second; while the lordly bison is compelled, year by year, though the requisite "nine points of law" be on his side, to relinquish his rich prairie haunts to the more sturdy ox. The wild hog, too, that most intrepid and tenacious of brutes, disappears in some unaccountable way from his favorite resort of field and forest, where the domestic hog roots and riots in his stead in ever-increasing numbers. Wherever these two opposing forces meet there seems to be but one inevitable result—the lower type must conform to, and be blended with the higher, or be exterminated.—*Phrenological Journal.*

Testing Seeds.—In a portion of Denmark, where one-fifth of the land is cultivated to clover, the vitality of the seed is tested by placing a quantity of the seed on a knife blade, and heating it over a lighted candle. The good seed will pop open and pop off, while the worthless remains and carbonizes on the blade. Mr. Christian Baggs, of Oakland, reminds us of this fact in response to an inquiry for practical tests for seeds.—*Rural Press.*

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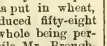

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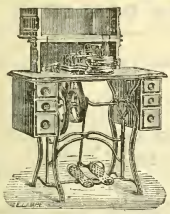

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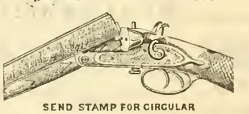

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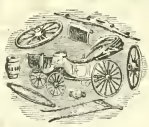

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Volume 6. CALIFORNIA Number 4.

APRIL.

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The California Agriculturist
AND
LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., April, 1875. No. 4.

A FINE HERD OF SHORT-HORNS.

Everybody who visits San Jose should take a ride to Alum Rock Springs, over the grand new drive from San Jose to that point. And they should bear in mind that at the Avenue Ranch is one of the finest herds of Short-horns on this Coast, the property of Cyrus Jones & Co., breeders and importers. The drive, which leads around hills that overlook the valley into a deep canon, wild with stream, forest and rocky declivities, where is a warm spring and other attractions, is becoming noted by all tourists. After rising to the top of the grade, a branch road leads to the right, to Buena Vesta Point, a grand outlook over the valley, donated to the public by the proprietors of Avenue Ranch. The road continues to the stock yards and residences of the proprietors.

Mr. Cyrus Jones, who has principal charge of the fine stock department, is a breeder long known in Illinois and Kentucky and noted for his success. What brought him to this State was partial failure of health in the inclement climate of his native home. But he came here to make California his home, and has chosen a locality at once healthy and adapted to the business.

Gen. Giles A. Smith, whose fine residence commands a magnifilent view of our valley, is a partner upon the same farm, as was Mr. F. H. Hicks, lately deceaseed.

These gentlemen came here about two years ago with their stock, and an acquisition it was to California when they came. Our farmers have been so slow in arriving to an appreciation of such stock, that, to less confident and persevering men, the results, so far as sales are concerned, would have been somewhat discouraging. But the people here, as well as in the East, are fast awakening to the advantage of breeding the best stock.

This herd is fast increasing in numbers and value. Only one thing has been really discouraging, and that was a disease common in California, and apparently peculiar to this State, that attacked this herd last Fall. It is common here among herds that are in good condition—seldom attacking animals poor in flesh. It may be properly called the "Yellow Disease," as the first symptoms are, excrement hard and yellow, and afterwards the skin all over the animal gets as yellow as saffron. The bowels are constipated, the appetite fails, and the animal eats earth till its bowels are completely clogged with it. The disease has been considered incurable, but although every animal in this herd was attacked only four died, but these were very valuable stock and the loss is severe enough. At the time of our visit most of the others were well and all were considered safely over the complaint. The animals that died were examined. The spleen showed a mass of corruption when cut into, the kidneys were badly affected, and the bowels were plugged up with the earth the animals had eaten. The gall was enlarged, and the liver affected. When the disease appeared, the animals had been eating nothing but dry feed for some time, and had had the run of a stubble field, with plenty of good water, air and exercise. The successful treatment consisted in opening the bowels with physic, giving clysters to aid evacuation, and assisting each organ to do its proper work in freeing the bowels and blood of impurities. The animals are now in good order, and show little ill effects from the sickness.

The two breeding bulls of this herd are of superior blood. Master Maynard, three years old, of fine form and pedigree, Duchess predominating, is a model of symmetry. We lost the notes we took the day we visited the herd, and cannot give particulars as to names and pedigrees, but Mr. Jones has them all at his tongue's end, as familiarly as possible. The two year old bull is also very fine; indeed, these two bulls were selected East last Fall by Mr. Jones, and are of the best blood extant. Among his fine cows are two that it is hard to choose between for perfect beauty. They cost Mr. Jones $1,600 each. One of them has a red bull calf which Mr. Jones values at $1,000—*no less*—and he is worth the money. A finer lot of young calves were never seen on this Coast. The most of them are bull calves—unfortunately, Mr. Jones thinks, for him, but we tell him *fortunately* for this State, as our stock men need hundreds of such to breed to their herds. We expect Jones & Co. will publish the pedigrees of this herd soon.

It will pay any stock man to visit Avenue Ranch, talk with the proprietors, and judge of the merits of the animals for himself.

"FAIR" TACTICS.

The feeling among the mass of the farmers in this valley against pool-selling-horse-racing at our fairs is growing so strong that the jockey members of the Santa Clara Valley Agricultural Society feel put upon their mettle to use every means to *protect* their horse-gambling interests.

A great majority of the life members seem to be horse jockey men, who have been called in more to manage races than to advance the industrial interests of the community. To draw the lines still closer, and discourage persons who are interested in elevating the industrial above the sporting interest from joining the Society, the members raised life memberships from $25 to $50.

The annual meetings for electing officers and doing other business are held in January. Annual members, to be able to vote, must get their tickets at or before that meeting. A disposition was beginning to be shown by several farmers and others to get annual memberships, costing $5, so as to attend the meetings and take part in the business of the Society, instead of waiting until the Fall fair to get annual membership tickets after the business arrangement for the season had all been made. Now, in order to still further defeat the disposition of the workingmen, who have always represented the industrial features of the fair, the jockeys have erected a fortification of defense by allowing *none but life members to vote* at their business meetings.

One of the active annual members, Mr. A. C. Erkson, tells how this last move was made:

At an adjourned meeting of the Society, in the latter part of January last, the Committee on Constitution and By-Laws, consisting of Cary Peebles, Coleman Younger and Oliver Cottle, reported among other things that none but life members be hereafter allowed to vote at the meetings of the Society, thus ruling out all the annual members.

There were just fourteen members present when this report was made. When the question came up on the adoption of this amendment to the Constitution, Mr. A. C. Erkson, an annual member, opposed it; setting forth, among other reasons, that it would disfranchise a great majority of the members who now contributed to the support of the Society. Almost all the funds received now by the Society come from annual members, and it would be manifestly unjust to deprive them of their vested rights to share in its management.

Mr. Peebles and Mr. Younger urged the necessity of such a change in Constitution principally for the reason that it would be very easy for some designing person or persons to procure the memberships of enough other persons to out-vote the life members, who have hitherto had the principal control of the institution, and to alienate or sell its real estate or to squander its funds in building a pavilion, or in some way to injure or destroy its usefulness.

In reply to that argument Mr. Erkson remarked that such statements and insinuations were anything but complimentary to the great mass of working farmers in this county, as well as to the mechanics who have contributed of their money and time and trouble in making the exhibitions the success they have been, and such aspersions on their honesty and good faith would be resented by them. Mr. E. remarked that he had contributed some $75 in the payment of annual dues, which was at least three times more than any one present had contributed; that he had served on committees of various kinds, and had the interests of the Society as much at heart as any life member could have, and he believed he expressed the sentiments of four-fifths of the annual members when he said that if you pass this vote disfranchising them you have struck a blow which will be fatal to the future welfare of the Society.

Mr. O'Donnell, Mr. Ryland, Mr. Jones, Mr. Cottle and one or two others spoke on the question; every one of them being in favor of excluding annual members. The question was then put and carried, every one voting for the change except myself. I then bowed myself out, saying that I could be of no further use to them—Mr. Ryland kindly remarking that "although no longer a voter, they would be very glad of my counsel and any other assistance I could render."

The idea that there would be a disposition on the part of annual members to squander the means of the Society, must have been advanced to blind honestly inclined members to the real objects of the jockeys. The only interest that any annual member who is opposed to making horse-racing a leading interest has shown, is to correct some of the abuses that already exist, and advance the Society and the people. But if any one has $5 to pay for a membership he can still have the honor of being one. If he cannot vote, he can "render assistance" and give aid and comfort to the cause.

Benj. Casey. S. H. Herring.

California AGRICULTURIST AND Live Stock Journal.

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The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

The annual meeting of the California Thoroughbred Cattle Breeders' Association will be held at the Grand Hotel, at San Francisco, on Tuesday, April 6th, at 2 p. m. The annual election of officers will take place, and other important business will be transacted.

The idea prevalent amongst many farmers that the gopher will not eat the roots of the eucalyptus, pepper tree and castor oil plant is erroneous. We have seen these plants destroyed by gophers, who seem to grow as fat on such food as on the most succulent vegetable. Strychnine and phosphorus are the proper condiments "to stay the stomach" of these rodents.

Quantity of Vegetables to Feed an Animal Daily. — Several persons have thought that we placed the estimate too high —24,000 pounds of vegetables to a steer in four months' feeding, or 200 pounds per day. But Mr. Story says they will eat that much. When we remember that there is only about 8 per cent. of nutriment in a beet, or about 16 pounds in 200, it will not seem very preposterous. And they will eat just about as much hay with the beets as they would without them. It is natural for animals of the bovine species to keep the stomach distended when feed is plenty. They can digest their food best when the ponch is full, and they cannot keep healthy without full stomachs. An animal that eats all the vegetables, roots or squashes, that he wants will not care to drink much water. But to take on fat quickly they must eat all they want of rich food without exertion, and be kept quiet and resting as much as possible.

A subscriber in Missouri asks whether a person can enter a piece of land under the homestead law in California. Yes, if the person can find a piece of Government land. There is some Government land worth having in out-of-the-way places, but nearly all of the desirable land is monopolized by grants and grabbers. Probably no State in the Union has been so cursed with land pirates as California has. In some parts of the State a man who attempts to pre-empt land does so at the peril of his life. Stock men overrun much desirable land open to pre-emption, and it seems that the rights of individuals are as little respected as when there was no law but revolvers and bowie knives.

The grape is the only plant we now think of that will be benefitted by allowing the moisture in the surface soil to escape or be taken up by other plants. And especialy when growing in rich, moist soil is this the case. We have known good crops of grapes to grow and be sweet and fine on soil that had been allowed to overrun with weeds, while just over a fence, where the soil was carefully cultivated, the grapes were mildewed, sour and almost worthless from excess of richness and moisture in the soil. We have watched this thing for the last five years, and feel assured that it is policy on moist soils to absorb the moisture by cultivating some succulent crop, or allowing grass to grow between the rows of grape vines.

Good Butter Cows.—The best proof that it pays to get good cows and then feed them plentifully of good grass and hay is given by the experience of Mr. F. T. Holland, who resides in the Evergreen district, east of San Jose. He has four fine cows, three of them high grade Aldernies and one a first-rate American cow. In the Fall and Winter he feeds roots and squashes with hay, and always gives hay night and morning when grass is ever so good, and he always has a lot of green grain and corn growing to furnish green feed when the grass in his pasture 'gets dry. Good stock and good feeding is his motto. From the four cows he has been making fifty pounds of butter a week during the flush of grass feed. This is probably not excelled by any four cows in this State. Mr. Holland has a forty acre farm which he takes pride in tilling according to correct practice, and he attributes his success with his cows as much to good feed as to fine stock.

The Present Dark Age of Inquisition. We sometimes hear persons speak of the Dark Ages and the age of the Inquisition as something that is past. But some events of the present day don't look much as though we had advanced very far ahead of "ye old times." For instance, the incarcerating of Philosopher Pickett in the jail at San Francisco, and keeping him there in defiance of the just sense of the community without trial, and for no greater offense than disputing the right of a judge to hold his seat longer than the time he was elected and honorably entitled to hold it, under the ruling of the same court that a *contempt* had been committed. For months poor Pickett has been suffering the abuse of unjust confinement in this boasted free government. The judges who keep him there should be arraigned for contempt of law and justice and ever sense of honor and humanity. At any rate, if all who have a supreme contempt for a Supreme Court that will assert its supremacy over a poor old man, who never meant harm to any good man or motive, by imprisoning him in this absnive manner could be imprisoned, there would be but few decent people left to tell the tale. Such justice ought to be mobbed if there is no other law to reach the case; and if there is, then the whole community who witness the outrage are equally guilty with the contemptible judges who inflict and permit such an outrage upon humanity.

Orange Culture. — From the time we started this journal, we have insisted that it is not necessary to go to Lower California to start an orange orchard, for the fruit can be produced in all the foot-hills about the great interior valleys, and in the valleys themselves, below the snow line. Every year is convincing more people of the truth of our assertion. For several years fine oranges have been grown in Stockton, Sacramento, Marysville, Oroville, Bidwell's Bar, Grass Valley, and many other places in the upper country—oranges that, in size, beauty and flavor, are not surpassed by any grown in the south. One of the most remarkable trees is at Bidwell's Bar, Butte county, near the snow line. It is now about twenty years old, is about a foot in diameter of trunk, spreads twenty feet, and is some 30 feet high. There is said to be upon it now seven hundred oranges. We saw this tree fifteen years ago; also trees at Marysville that are now doing finely. This season there has been a better demand for orange trees in this part of the State than ever before, and the demand will increase from year to year until every home orchard will contain orange as well as apple trees.

SENDING PAPERS EAST.

Quite a number of our subscribers, after reading the AGRICULTURIST, send it East to their friends. We often hear from them. Following is a word such a subscriber sends us in way of encouragement:

EDS. AGRICULTURIST: A word of encouragement may not harm you from away down in the Old Bay State:

"The papers you send us are read and re-read, then loaned, and then sent to distant friends. T— thinks he can't see to read our home paper, but he can see to read yours through and through, particularly 'that AGRICULTURIST,' which he often speaks of as giving him the greatest interest." (T— is an old California pioneer.)

"I am sure you nor sny one else ought to be sick in California. Oh, we have had *such a Winter*, and now the walking is horrible. The snow is till very deep (March 15th), but no sleighing, for it is slop, slop. Some streets seem like rivers. But when we do have a pleasant day, it seems so bright that we can look forward to a 'coming Spring.'"

Yours, "CUSH."

We will assert, right here that there is no paper in the State that uses clearer new type, or is more carefully printed than the AGRICULTURIST. We take a pride in sending out a neat paper, stitched and trimmed, and ready to read like a book, without tearing or cutting of leaves. We spare no pains to make it acceptable to everybody, and of such a character that it will always be welcomed into every family.

Poetry.

"Only a Farmer's Daughter."

HE'S only a farmer's daughter,"
A stylish lady said,
With a scornful glance of her handsome eye
And a toss of her haughty head.

She was frilled and flounced and furbelowed
In the very latest style;
Her head was a wonder of crimps and curls,
And her train something less than a mile,

Her hands, that sparkled with many a ring,
Were shapely and fair to view;
As they well might be, for no useful work
Were they ever allowed to do.

To hear her talk of the "lower class,"
Of their sins against propriety,
Of "her family," and of "country girls,"
And her horror of "mixed society,"

One would think that among her ancestry
She numbered at least an Earl.
(Her father was quite a carpenter,
And her mother a factory girl.)

They say she is brilliant and beautiful;
I will not their words deny;
But ah! the farmer's daughter
Is fairer, by far, to my eye.

She is not in the height of fashion,
But is very becomingly dressed,
With flounces enough for comfort,
And they look as if made of the best.

Mirth and innocent happiness
Out of her blue eyes shine;
Her hair is untortured by crimps and curls,
And she wears it by right divine,

No mother toils in the kitchen for her,
While she on the sofa lolls,
Novel in hand, dressed in her best,
Receiving her morning calls.

A share in the heat and burden of life
She willingly, cheerfully takes,
And duty and love, in that happy home,
A pleasure of labor makes.

And though you may smile at this curious fact,
I have seen her with hoe in her hand,
While she planted the corn, or waged war on the weeds,
When man's help was scarce in the land.

And her flowers—well, next summer you'll see them yourself,
As you ride past the farm on the prairie,
And mark the home, covered with roses and vines,
The work of this Martha or Mary.

And I'm sure you will say, spite the verdict of those
Who live out in fashion's gay whirl,
That "only a farmer's daughter" means
Only a sensible girl!

Under the Daisies.

It is strange what a great deal of trouble we take,
What sacrifice most of us willingly make,
How the lips will smile though the heart may ache,
And we bend to the ways of the world, for the sake
Of its poor and scanty praises.
And time run on with such pitiless flow,
That our lives are wasted before we know
What work to finish before we go
To our long rest under the daisies.

And too often we fall in a useless fight,
For wrong is so much in the place of right,
And the end is so far beyond our sight,
'Tis as when one starts on a chase by night,
An unknown shade pursuing.
Even so do we see, when our race is run,
That of all we have striven for, little is won,
And of all the work our strength has done,
How little was worth the doing.

So most of us travel with very poor speed,
Failing in thought where we conquer in deed,
Least brave in the hour of greatest need,
And making a riddle that few may read
Of our life's intricate maze.
Such a labyrinth of right and wrong,
Is it strange that a heart once brave and strong
Should falter at last and most earnestly long
For a calm sleep under the daisies.

But if one poor troubled heart can say,
"His kindness softened my life's rough way,"
And the tears fall over our lifeless clay,
We shall stand up in memory in brighter array
Than if all earth rang with our praises.
For the good we have done shall never fade,
Though the work be wrought and the wages paid,
And the wearied frame of the laborer laid
All peacefully under the daisies.

What is His Creed?

He left a load of anthracite
In front of a poor woman's door,
When the deep snow, frozen and white,
Wrapped street and square, mountain and moor.
That was his deed—
He did it well.
"What was his creed?"
I cannot tell,

Blessed "in his basket and in his store,"
In sitting down and rising up;
When more he got he gave the more,
Withholding not the crust and cup,
He took the lead
In each good task.
"What was his creed?"
I did not ask.

His charity was like the snow,
Soft, white, and silent in its fall;
Not like the noisy winds that blow
From shiv'ring trees the leaves—a pall
For flower and weed
Drooping below.
"What was his creed?"
The poor may know.

He had great faith in loaves of bread
For hungry people, young and old,
And hope-inspired, kind words he said
To those he sheltered from the cold.
For we must feed,
As well as pray.
"What was his creed?"
I cannot say.

In words he did not put his trust,
His faith in words he never writ;
He loved to share his cup and crust
With all maukind who needed it.
In time of need
A friend was he.
"What was his creed?"
He told not me.

He put his trust in heaven, and he
Worked well with hand and head;
And what he gave in charity
Sweetened his daily bread.
Let us take heed,
For life is brief.
What was his creed?
What his belief?

I've Been Thinking.

I've been thinking, I've been thinking,
What a glorious world were this,
Did folks mind their business more
And mind their neighbors' less!
For instance you and I, my friend,
Are sadly prone to talk
Of matters that concern us not,
And others' follies mock.

I've been thinking, if we'd begin
To mind our own affairs,
That possibly our neighbors might
Contrive to manage theirs.
We have faults enough at home to mend,
It may be so with others;
It would be strange if it were not,
Since all mankind are brothers.

Oh, would that we had charity
For every man and woman!
Forgiveness is the mark of those
Who think, "to err is human."
Then let us banish jealousy,
Let's lift our fallen brother,
And as we journey down life's road,
Do good to one another.

Souls, not Stations.

Who shall judge a man from manners?
Who shall know him by his dress?
Paupers may be fit for princes,
Princes fit for something less.
Crumpled shirt and dirty jacket
May beclothe the golden ore
Of the deepest thoughts and feelings;
Satin vest could do no more.

There are springs of crystal nectar
Ever welling out of stone;
There are purple buds and golden,
Hidden, crushed and overgrown.
God, who counts by souls, not dresses,
Loves and prospers you and me,
While he values thrones—the highest—
But as pebbles in the sea.

Man, upraised above his fellows,
Oft forgets his fellow then;
Masters, rulers, lords, remember,
That your meanest hands are men!
Men by labor, men by feeling,
Men by thought and men by fame,
Claiming equal rights to sunshine,
In a man's ennobled name.

There are foam-embroidered oceans;
There are little weed-clad rills;
There are little inch-high saplings;
There are cedars of the hills:
But God, who counts by souls, not stations,
Loves and prospers you and me,
For to him all vain distinctions,
Are as pebbles in the sea.

Toiling hands alone are builders
Of a nation's wealth and fame;
Titled laziness is pensioned,
Fed and fattened on the same.
By the sweat of other's foreheads,
Living only to rejoice,
While the poor man's outraged freedom
Vainly lifteth up its voice.

But truth and justice are eternal,
Born with loveliness and light,
And sunset's wrongs will never prosper
While there is a sunny right.
And God, whose world-heard voice is singing
Boundless love to you and me,
Will sink oppression with its titles,
As the pebbles in the sea.

Wishing and Having.

BY R. H. STODDART.

If to wish and to have were one, my dear,
You would be sitting now,
With not a care in your tender heart,
Not a wrinkle upon your brow:
The clock of time would go back with you,
All the years you have been my wife,
Till its golden hands had pointed out
The happiest hour of your life.
I would stop them at that immortal hour;
The clock should no longer run.
You could not be sad, and sick, and old,
If to wish and to have were one.

You are not here in the winter, my love,
The snow is not whirling down;
You are in the heart of the summer woods,
In your dear old seaside town.
A patter of little feet in the leaves,
A beautiful boy at your side—
He is gathering flowers in the shady nooks—
It was but a dream that he died!
Keep hold of his hands and sing to him.
No mother under the sun
Has such a seraphic child as yours,
If to Wish and to have are one.

Methinks I am with you there, dear wife,
In that old house by the sea;
I have flown to you as the bluebird flies
To his mate in the poplar tree.
A sailor's hammock hangs at the door,
You swing in it, book in hand;
A boat is standing in for the beach,
Its keel now grates the sand;
Your brothers are coming—two manly men,
Whose lives have only begun—
Their days will be long in the land, dear heart,
If to wish and to have are one.

If to wish and to have were one, Ah, me!
I would not be old and poor,
But a young and prosperous gentleman,
With never a dun at the door;
There would be no past to hewail, my love,
There would be no future to dread;
Your brothers would be live men again,
And my boy would not be dead.
Perhaps it will all come right at last.
It may be when all is done,
We shall be together in some good world,
Where to wish and to have are one.

Why?

BY MARY L. RITTER.

Why came the rose? Because the sun, in shining,
Found in the mold some atoms rare and fine.
And stooping, drew and warmed them into growing
Dust, with the spirit's mystic coustersign.

What made the perfume? All his wondrous kisses
Fell on the sweet, red mouth, till, lost to sight,
The love became too exquisite, and vanished
Into a viewless rapture of the night.

Why did the rose die? Ah, why ask the question?
There is a time to love; a time to give;
She perished gladly, folding close the secret
Wherein is garnered what it is to live.
—[Scribner for February.

Do Something.

If the world seems cold to you,
Kindle fires to warm it.
Let their comfort hide from you
Winters that deform it.
Hearts as frozen as your own
To that radiance gather;
You will soon forget to moan—
"Ah, the cheerless weather!

If the world's a "vale of tears,"
Smile till rainbows span it;
Breathe the love that life endears,
Clear from clouds to fan it.
Of your gladness lend a gleam
Unto souls that shiver;
Show them how dark sorrow's stream
Blends with hope's bright river.

HOW TO GET A GOOD FLOW OF MILK.

How to keep up a good flow of milk seems to be a question that puzzles many of our farmers. As soon as the feed begins to get a little short and dry, the flow of milk gets short, which shows conclusively that to keep up a good supply of milk the cows must have a good supply of green feed. If a farmer will take pains to have a patch of wheat, rye or barley sown that he can cut a quanty of each day to soil his cows with, the flow of milk will not decrease. A patch of corn or sorghum can follow the green grain, or a patch of alfalfa will answer the same purpose. It needs no new testimony to prove that it pays to soil dairy cows. It has been conclusively proven time and again. A good windmill will supply water to irrigate enough green feed for half a dozen cows through the entire Summer, where they have the run of a pasture and stubble fields in addition.

In order to have cows in good order when the green grass starts in Winter, every farmer should have stored a quantity of good hay to feed them twice a day. Even after the grass gets to be abundant enough to fill the stomach, it is found best to continue the feeding of hay. Cows that get plenty of good, nutritious hay, in addition to grass, never get sick and bloated on grass, but keep healthy and give a maximum quantity of milk. Straw is not so good, as it is hard to digest and does not supply the nutriment needed. No cow can give a good quantity of rich milk unless her stomach is in good order, her digestion perfect, and the supply of food is of good quality and plenty of it. If the pasture is so short that it takes up her entire time during the day to collect enough, then she will not give a full quantity, for she needs a good deal of rest as well as food. A good feed of hay in the yard or stable when green feed is short, or a soiling of green grain or corn fodder when the feed gets dry in pasture, will make it all right. A crop of vegetables, such as beets, squashes, etc., to feed when pastures fail in the Fall and early Winter, should be considered indispensable. Bran is good at any time of the year, but good, sweet hay is just about as good as bran. It should be remembered that hay for cows should be cut when quite green; for horses, it is better cut later than for cows. For instance, if it is wheat hay, it should be cut when the grain is in blossom for cows, and when it is in milk for horses. A horse seems to require more solid feed; he chews his feed finer than a cow does. A cow can digest green hay, or hay cut when quite green, better than she can hard hay, or hay cut after the seed is formed.

See that the cows have a plentiful supply of *clean* water, as pure as possible, at all times. And bear in mind that it is economy to *feed liberally*, and that without a full supply of nutritious food there will be a failure in the quantity and quality of the milk. And another thing is important: It will not do to let cows get poor at any season. They must be kept in good condition, or else they cannot be expected to give a large yield of milk even when feed is good and they have regained their lost flesh.

VILLAINOUS LAND TRANSACTIONS.

There is a good deal of villainy exposed nowadays. Investigating Committees are occasionally playing havoc with the designs of mean men, and either showing up their transactions, or preventing them from springing the traps that they have set to defraud honest people. There is need enough for investigation, it seems, in almost every public department; for wherever investigation is honestly conducted, there is almost sure to be found some rottenness. Perhaps in no instance was there ever found more blackness than has been and may be brought to light through the fraudulent land monopolies and grabs in California.

We have just been looking through the Reports of the Joint Committees on Swamp and Overflowed Lands and Land Monopoly, presented at the Twentieth Session of the Legislature of California, 1874. A mass of testimony, taken before the Committees, is here given, together with short reports of the Committees themselves. We wish that this book of 354 pages could be placed in the hands of every person who takes interest enough in such matters to carefully peruse it. We obtained ours by addressing the Secretary of State, Sacramento, and paying the expressage on it to San Jose. We think that the parties who appear by the testimony rendered to be absolutely guilty of dishonesty and fraudulent transactions, should be held up to the people in their true light, and be publicly published for their villainy, that they may be known as dangerous and untrustworthy. There seems to be one very prominent characteristic about these men who rob the people and government: They do not often back the face to put themselves forward whenever they think there is a hope of gaining prestige, and making something out of the confidence position can in any way give. For instance, we notice that one of the most conspicuous amongst the villains who are pointed out by the Committee is one Josiah Earle, the same, we believe, that holds or has an office close to the Grange headquarters in San Francisco, and the same that has issued, for extensive circulation, a Grangers' Emigrants' Guide to California, with the expressed countenance of the Executive Committee of the State Grange of California. And this, too, for the apparent purpose of getting the confidence of the thousands who are looking towards California for homes, that they may seek the same through him. Now, we take the privilege of publishing a portion of the Report of the Swamp and Overflowed Lands Committees, as showing their opinion of this fellow, founded upon the testimony given before them by several witnesses, that Grangers and other readers may form their own opinion of Josiah Earle, who would sail, under the Grange flag, as the Emigrants' Guide?

Your Committee is satisfied, from evidence, that the grossest frauds have been committed in swamp land matters in this State, but are unable to suggest proper remedies for lack of full information.

A great amount of interest has attached to what is known as the "Inyo Grab," attempted to be perpetrated by one Josiah Earle; and as this is a representative outrage of a general class of operations, your committee has felt constrained to give the subject matter a thorough investigation. Summarizing the evidence, we find: That the speculator in this case is the Register of the United States Land Office, at Independence, Inyo County—a position doubtless secured for the purpose of furthering his grand scheme of obtaining land not subject to location under the swamp land laws of the State, unless deception and fraud could be invoked to his assistance. This enterprising gentleman made application for one hundred and thirty-three thousand acres in Inyo County, about twelve thousand acres of which we find, by abundant evidence, are covered by bona fide pre-emption and homestead settlers, who have lived upon those lands for years, and many of whom are the oldest residents in the county.

The lands were surveyed by the General Government some years since, and returned as high, which they unquestionably are, as there can be *no* crops produced thereon *without extensive and constant irrigation*. This Mr. Earle (the applicant and Register in question) then made a peremptory demand upon Mr. Hardenbergh, the United States Surveyor General for this State, for the privilege of naming a local Deputy United States Surveyor to do this particular work, and of course in the interest of his friend Earle. This, fortunately for the unsuspecting settlers who knew nothing of it, was refused; as, had it been done, there would have been but little hope of redress for the settlers—had Earle been successful in procuring the selection of a tool ready to do his bidding in the segregation as "swamp" of these high, dry lands; and as Earle had himself appointed Register of the United States Land Office, probably in order to exercise his official position to further his personal interest in connection with this black and infamous transaction.

In furtherance of the same line of policy, one Joseph Seeley, acting as Deputy County Surveyor, received and forwarded the applications of Earle, and, to the mind of your committee, must have been aware of the perjury committed by Earle, stating that the land was "swamp," and that, "to his actual knowledge no residents or claimants" were in possession of the land.

With a less honest or vigilant Surveyor General—one who, for instance, would have listened, with willing ear, to Earle's statement that "we can get all the land over there"—this outrageous attembt at fraud and robbery might have been practicable; but the applications were refused, and the papers held for some hoped-for authorized examination.

Necessarily your committee started in uninformed, and not until after tedious investigation could we be able to recommend such legislation as would effectually reah and cure the gigantic evils which have grown out of the reckless land policy of the Government, and to provide a correction of the laws which have been so manifestly in the interest of the speculator.

LOSS OF MOISTURE FROM THE SOIL.

How to best utilize what moisture there is stored in the soil by winter rains, is a matter of much importance to farmers in this country, where we cannot depend upon Summer rains, and especially in places where irrigation cannot be resorted to.

Our grain fields should be so left that as little moisture as possible will escape through the surface soil into the air. We are satisfied that two or three inches of loose soil, left light and fine by harrowing, is better than to roll the last thing and leave the soil pressed down hard on the surface. The loose soil will act as a mulching to the moist soil underneath, while the soil that is pressed down will absorb the moisture from below and expose it to the air to be licked up and carried

away by the winds. This, we are satisfied, is as true in practice as in theory, and we accept it as a fact, notwithstanding some men may differ from us.

All plants absorb moisture from the soil where they grow. Most weeds are greedy absorbents of water, and no weeds should be allowed to rob the water from grain-fields and orchards. It pays to go over grain-fields and pull out mustard, and to cultivate and hoe orchards and gardens as long as there is any sign of growing weeds.

We call attention to experiments made in June, 1870, by Messrs. Lawes and Gilbert, of England, to ascertain not only the amount of water in land lying fallow, but also in that on which a crop of barley was growing. In making this experiment, each nine inches of earth, to the depth of four and a half feet, were separately tested. These analyses showed that an acre of dry soil three inches deep weighs 1,000,000 pounds or 500 tons; fifty-four inches deep weighs eighteen times as much, or 9,000 tons; when wet, about one-eighth more.

The following table shows the per centage of water in the land at different depths:

	Fallow land.	Barley land.	Difference.
1st nine inches . .	30.56	11.91	8.65
2nd " " . .	29.53	19.32	10.21
3d " " . .	34.84	22.83	12.01
4th " " . .	34.32	25.09	9.23
5th " " . .	31.31	26.98	4.33
6th " " . .	33.55	26.83	7.17
Mean . . .	30.65	22.09	8.56

From these figures is appears that the barley crop must have pumped up and evaporated 1,035 tons of water per acre.

Messrs. Lawes and Gilbert say: "As the excavation proceeded, barley roots were observed to have extended to a depth of between four and five feet, and the clayey subsoil appeared to be much more disintegrated and much drier where the roots had penetrated than where they had not."

Aside from the main subject of this article we can see plainly, by this experiment, one of the great advantages there is in

SUMMER-FALLOWING.

By summer-fallowing, that is, plowing the ground in the Spring and leaving the surface light, so that moisture cannot readily escape into the air, and keeping weeds and plants from growing that will draw away moisture from the soil, nearly all the Winter's rains remain stored in the soil during the season to be added to by another rainy season. The great benefit of summer-fallowing, then, seems to be the supplying of such soils as are not thoroughly saturated by one season's rain, with two season's rain for one crop of grain. At any rate, this is one very important consideration of summer-fallowing; and crops can be grown by this means, where, with but one season's rain alone, they would dry out before maturity. When grain is sown early so as to profit by all the moisture of winter weather, and the foliage covers the soil before dry weather, the growing grain in a measure protects the soil from drying sun and winds.

Farmers, Write Your Experience.—It is not so much by publishing new theories, as by keeping tried and tested facts before its readers, that the agricultural press benefits the farmers, and there is no one but may contribute something from his observation and experience that will benefit his neighbor.

A SAN JOSE PRUNE ORCHARD.

Probably the best prune orchard in the world is that belonging to Mr. J. M. Patterson, of San Jose. It is not a very extensive orchard—less than 2,000 trees—but it is a very profitable one. The trees, set in rich, moist, alluvial soil, 12 feet apart, are remarkably thrifty, and produce crops of very superior fruit.

Last season 600 Gross Prune de Agen trees produced some twenty-five tons of fruit, worth, at wholesale, not less than four cents per poind, or $2,000. The fresh fruit brought, in 20-lb boxes, in New York, twenty-five cents per pound, and in San Francisco was worth, nicely packed in small boxes, from six to eight cents per pound. The same variety of prunes, pitted and dried by the Alden process, were sold here, wholesale, to an Eastern firm for thirty cents per pound, and thee pounds of green would make one of dried fruit.

There were produced in the same orchard over five tons of the Petit Prune de Agen, a small, very sweet prune, and one in demand for its excellence. These are prized as drying prunes, and will only lose one-half by evaporation. The difference in flavor between this prune and the large Gross Prune de Agen is considerable: the small prune is very sweet, while the larger is quite tart for a prune. There were several tons of Damson plums and a quantity of Green Gages and other plums produced in this orchard, all of very fine quality. Every season the fruit is thinned out nearly one-half when from one-quarter to one-half grown, to keep the trees from overbearing. The advantage in this is, the trees are prevented from breaking and what fruit is left grows to a very large and uniform size.

Mr. Patterson's experience in the prune and plum business is valuable to himself, and would be to any one who contemplates going into the business of cultivating such fruit. He expresses the opinion that the Fellenberg is the very best prune for drying that has been yet produced. It is about as tart as the large prune, the pit separates freely from the fruit, and it dries very readily with little more loss than the small prune.

The "American taste," as a nurseryman said lately, while we were talking upon this subject, "demands tart fruits, and we have to be governed in our selections of varieties by this taste." With some exceptions, this is true; and probably a tart prune may be *more* in demand than the sweetest Petit Prune de Agen, although this fruit must always be in demand for its delicate flavor and sweetness.

Mr. Patterson says that the genuine Green Gage plum will long be in good paying demand for canning and jelly. There is a large demand and ready market for almost any quantity of such in the States east of the mountains. There is such a demand, in fact, that the Imperial Gage is palmed off for the Green Gage in cans and jellies. Also there are counterfeit jellies that never saw a plum at all. This Mr. P. spoke of as most deplorable, and a subject for investigation. California fruits are generally held, like California honey, as far superior to anything put up up East, and the business of putting up fruits here for the Eastern markets should be so firmly established in honest practice as to retain its good name and make it remunerative and satisfactory.

Mr. Patterson says that there is a difference of two years in the bearing age of plum trees between the budded and grafted trees, the grafted trees bearing two years sooner than the budded ones. This is his experience. Grafted trees four years in orchard, set when one year old, bore ten pounds each. When the trees are eight to ten years old they will bear one hundred pounds to the tree on an average. Ten acres in plums and prunes, on suitable soil, are all that any one family would want or need. It would bring in a liberal income every year. Twelve feet distant (300 trees to the acre) is far enough apart to set plum and prune trees in the orchard. Whenever a tree does not produce the variety of fruit wanted, he cuts the head off and grafts at once. It is poor policy to have trees in the orchard that do not produce the kinds that are profitable.

Mr. Patterson is, this Spring, whitewashing the trunks of the trees up into the limbs as far as he can reach handily, to kill all parasitic plants and insects. He is sure that lime wash does not injure the bark, but rather protects it from heat and drying winds by its coating, to the advantage of the tree. The surface soil is kept well cultivated, so as to prevent the waste of moisture from the lower soil by evaporation and to keep all weeds from exhausting the moisture and richness of the soil. He does not prune heavily, but thins out the fruit.

He is offered $2,000 a year for the fruit his orchard contains without further expense to himself than cultivating and caring for the trees. This, on about six acres of orchard, many of the trees of which are too young to bear much.

HOW THEY LIKE THE AGRICULTURIST.

We often receive cheering words from our subscribers who renew their subscriptions. We do all we can to make a good, practical journal, and of course we like to see that our efforts are in a measure successful. A lady writing from Washoe, Nevada, and paying two years in advance, writes: We all like your paper very much, and feel that we cannot do without it. May you gain a rich reward for the noble stand you have taken and maintained against intemperance and other evils; and that all true friends of Right may aid you is our fervent prayer.

Mr. J. T. Wood, of Carson, Nevada, paying his subscription and sending a new one, writes: I believe there is not another paper in America that furnishes so much useful reading for so small a subscription price. So long as I live you will have me for a friend and subscriber. You deserve to prosper, and no good man will keep you out of your subscription money. I will get some more subscribers. I consider it a loss to Nevada that the California Agriculturist has not a more extensive circulation here.

Moses Hopkins, of Nicolaus, Sutter Co., California, writes: "I prize your paper for

its moral tone and anti-humbug sentiments, and take pleasure in adding my name to the list another year."

Another subscriber, Mr. W. E. Cooley, a farmer near Los Angeles, sends some new names and says: "I am hoping to give your paper a start in this vicinity another year."

We have many good friends amongst our subscribers who are practical, earnest men and women, and who are working to advance the interests of the Agriculturist. We need the assistance of all, for it is slow work to build up a paper on its merits alone, without the aid of every one who can lend a helping hand. Papers that are run in the interest of railroads, land monopolies and corporations, and cater to any interest that offers pay, soon gain large circulations and are so upheld that success comes without a struggle. But a paper that hesitates not to attack any evil, and is conducted on principle, and is devoted singly to the greatest good of the honest portion of the community, does have a hard row to hoe, and if it cannot live and be made successful by the friends of rightful progress, it stands no show whatever. We have often said that we would sooner fail in a good cause than succeed in a bad one, but we rejoice that we are succeeding in a good cause, and owe much of that success to the good will and efforts of good people, our friends.

FATTENING BEEF-CATTLE FOR MARKET.

Last month we gave an account of A. N. Story's experience in fattening cattle on his farm. We then stated that this Spring his cattle would not bring the usual price—10 to 12 cents on foot—owing to an abundance of good feed and fat beef elsewhere. He has brought us an account of fifty head, sold at 7 cents on foot. He never before got less than 10 cents on foot for such beef at this season of the year. But notwithstanding the low price of beef this exceptional year, figures will show that Mr. Story is ahead on the enterprise. For the fifty head of cattle, the price paid, reckoning all losses out, did not exceed twenty dollars per head, or $1,000. The cattle, when fattened, averaged 700 pounds each, at 7 cents, $49 per head, or $2,450, which left $1,450 to pay for feeding. Mr. Story's farm of about 380 acres will fatten 100 head a year, besides raising other stock enough, with a diversity of products, to pay running expenses. At 7 cents this would be $2,900 a year income. But 11 cents has heretofore been the average price of his fat cattle in the Spring. Reckoning them at 10 cents and the weight at 700 pounds, 100 head fattened each year, and the figures will stand thus: 100 head cost $20 each—$2,000; 100 head bring $70 each—$7,000; increase in value—$5,000. We have reckoned no interest on money invested, nor Mr. Story's time, as every farmer has to put in his own time somehow. The way he manages, his expense for hired help is not heavy. Mr. Story always has hay or grain to sell, and is not confined altogether for resources to his cattle. Let any farmer reckon for himself, and he will see that raising and fattening stock, in connection with hay and grain farming, will pay.

Correspondence.

The Cultivation of the Olive in California.

BY JOHN D. SCOTT, M. D.

Eds. Agriculturist: The visitor to this State is as much astonished as delighted to see the groves of evergreen olive trees in and about the old missions so common in California. The cultivation of this beautiful and valuable tree has ever been associated in his mind with the sunny vales of France and the balmy airs of Italy. He forgets for a moment that the great Pacific Ocean Stream, bubbling up from the Torrid zone and laving and warming these Western shores, is doing for us what the Gulf Stream in the East, flowing across the Atlantic, does for Western Europe. It is well known that whilst England, France, Portugal and Spain are basking in warm sunshine, Nova Scotia, New Brunswick and the New England States, in the same latitudes, are shivering in the frigid grasp of Winter. A similar cause produces the same effect here. Whilst we are enjoying an Italian climate, our minister to China writes us that the denizens of the so-called Flowery Kingdom are bound fast in the icy fetters of Winter. It seems, then, to be one of the great climatic laws of our globe that the isothermal lines shall rise to very high latitudes on the Western borders of the two great continents, whilst they fall very low on the Eastern, giving a mild and genial climate to Western Europe and Western America, and a frozen one to Eastern America and Eastern Asia.

These trees were planted here by the Jesuit Fathers over three quarters of a century ago. Whilst Europe was being bathed in the blood of unholy and mad ambition, these noble, self-sacrificing men, tossed by the stormy waves of two oceans, or daring the untried perils of a trackless continent, were here in these Western wilds endeavoring to establish the Kingdom of the Prince of Peace—their sword the Word of God, their Standard the Cross. What more appropriate selection could they have made from the vegetable kingdom to remind them of their own native Italy,

"Land of arts and arms,
Where Nature spreads her richest charms,"

than the olive?—first harbinger of dry land at the Deluge, and ever after deemed the emblem of peace. Whilst the stately monuments of conquerors and kings will crumble into dust, the olive alone, ever self-producing and self-perpetuating, which these Pioneer Fathers first planted, here will keep their names and unselfish deeds as green in the memories of men as the emerald leaves upon its own boughs. The simple children of forest and plain whom they were accustomed to gather around their holy altars for morning and evening worship, are scattered and gone; the mission villages they established are fading into the dim twilight of history, and even the stately temples of God, so sacredly cherished and so elaborately adorned with the painted scenes of the Apostolic age, are fast crumbling into the dust whence they arose. But the olive will never die. Having found a soil as congenial, and a climate and skies as warm and beautiful, as ever blessed its native Italy, it will go on increasing in numbers and usefulness until the teeming millions of the Pacific shall rise up and call its first propagators "blessed."

There are many hundreds of these trees now flourishing and in full bearing in the various missions in this State. They have proved hardy and productive, so that their cultivation here is not a matter of venture or experiment. If the recommendation was now first made to plant the olive—if we were called on to send to France or Italy for our first trees, at great risk and expense, to enter upon an uncertain and untried business, there would be great reason for hesitating in following the advice. But, as we have indicated above, all these experiments have been made for us, and they have proved eminently successful. The trees grow here thriftily, bear abundantly, and many hundreds of gallons of oil are profitably manufactured from them yearly.

In addition to its commercial, the Olive has an ornamental value. Its perpetual verdure is most grateful to the eye, its shade is dense and cooling, and when loaded with its dark purple berries, it presents the appearance of millions of jets set in oceans of emerald green.

The trees are easily, cheaply and rapidly propagated by pieces of the roots, suckers, seeds, or cuttings. The latter mode is most generally adopted. A trench is dug six or eight inches deep, and the soil thrown out on one side. On this inclined bank cuttings about a foot long and from one to one and a half inches in diameter, are laid about a foot apart. The ditch is now filled up and the soil drawn up to near the top of the cuttings. But one stem is permitted to grow. The soil is kept loose about the young trees and free from weeds. They are watered occasionally, and at three years old they are ready for the orahard. Their distance apart is 36 feet in light, hilly soil; in rich soil, 48 feet. Vegetables, corn, beans, and other light crops may be cultivated in the inter-spaces to help to pay expenses until the olives come into full bearing. They begin to bear here in the sixth year, sometimes earlier, and the fruit may be profitably gathered and converted into oil about the tenth or twelfth year.

Would it not be advisable for our fruit-culturists, in setting out orchards, to give an olive tree every fourth space? When the short-lived trees shall have perished, the olive will be in full bearing, and will constitute an inheritance of incalculable value. A full-grown tree produces from 50 to 75 gallons of oil annually, which at $4.50 per gallon would far outstrip in value any other fruit tree—the far-famed Los Angeles orange not excepted. Some exceptional trees have been known to yield 300 gallons each in a year, which would be worth more than the whole annual product of some farms that we are acquainted with.

As the oil contains the same principles as fresh butter—*olein* and *margurin*—its universal use in the south of Europe, in all culinary preparations, is at once obvious. The people there use it in the thousands of ways in which we here use pork, bacon, lard and butter.

The reason why it is looked upon with so much repugnance by our people is that we very seldom see a fresh article. When it reaches us it is generally old and strong, and consequently unpalatable. There is as much difference between the freshly pressed oil, which has a sweet, nutty flavor, and that which we see generally in our market, as there is between nice, new-made butter, just from the churn, and the strong, rancid article "old enough to speak for itself." Hence, to popularize its use, it must be raised in our own country, when a healthy and valuable article of food will be added to our productions. We cannot have too many food products. "We know not what a day may bring forth." A nation, to be truly independent, must not only be so politically, but gastronomically. Full stomachs are deadly foes to bread riots.

France lost nearly all her olive trees from cold in the years 1709 and 1788. The frosts of that country sometimes kill the extremities of the the bearing limbs, thus cutting off the crop entirely for that year or very much diminishing it. Neither of these accidents have ever been known to happen here, so that, with full crops every year at a fair remuneration, that profit would be greatly enhanced in cases of partial or total failure of crops in Europe. Prior to the disastrous year of 1788 France consumed $15,000,000 worth of oil, yet was compelled to import $6,000,000 more to supply her home demand. England imported, in the year 1830, 2,791,057 gallons. In 1850 the United States imported $91,600 worth; in 1855, $165,173, and in 1859 $535,-975. Some idea may be formed of its commercial value when it is known that the little kingdom of Naples exports annually 7,300,000 gallons. Now, as the olive is a sea-side tree and grows to absolute perfection in all our southern coast counties, a very short calculation would go to show that, with a little foresight and industry, California would soon become the oil mart of the world, as Italy is to-day; for each one of our coast counties would make, perhaps, half a dozen Naplesses. And this need not be at the expense of the rich wheat land of our valleys, for the olive is known to flourish equally well, if not better, on rolling, rocky lands, of which we have millions of acres in our foot-hills that could not be applied to a better purpose. And when these acres shall have been covered all over with olive trees, in full bearing, the question as to "what shall we do with our boys and girls?" will be of easy solution in the short and appropriate answer "Set them to picking olives."

The olive tree is of extraordinary longevity. Some are known to be 400, others 700 years old at the present time, and bid fair to flourish for many centuries yet to come. There are some in Italy which are supposed to have been in existence since the time of Pliny. Others still linger about the Mount of Olives, but whether they ever extended their sheltering boughs over the kneeling Savior, history, perhaps, will ever be silent.

Its timber constitutes one of the most valuable of woods. It takes a high polish, and is greatly prized by cabinet-makers. It is used extensively in in-laying with other valuable woods. The wood of the root, when polished, presents a marbled appearance, and is used for making snuff-boxes, dressing cases and other ornamental articles.

Dried, pickled and preserved olives are used as food.

The bark and leaves are used in medicine as astringents, tonics and febrifuges.

The gum resin which exudes from the trees is used in perfumery.

The oil makes very superior castile and toilet soaps.

It forms an important ingredient in hair-oils, cosmetics, plasters and ointments.

Large quantities of it are used in woolen mills in dressing cloth.

Before the discovery of petroleum, it was universally used for illuminating purposes.

Jewelers use the finest of the oil in lubricating their watch and clock works.

Mixed half and half with lime water, it forms one of the best applications for burns and scalds. Every family should keep a bottle of this mixture on hand in case of emergency.

Rubbed all over the body, it is said to have afforded protection from the plague; but whether this be true or not, its external use is growing rapidly in favor with the regular profession in diseases of the chest, bowels and joints. Extreme unction, as it might be called in these cases, has been known to act like a charm in the last stage of croup, when everything else had failed to afford relief.

It is a valuable antidote to a great many poisons, and is believed to act efficiently in this way in poisonous doses of strychnine.

With so many uses for it already, and when we manufacture a sweet home article to be universally used in our culinary preparations as it is used in Europe, there is not much danger of our ever stocking the market with oil, at least for several centuries to come.

There are different varieties of the olive, as there are of the apple and pear. These are perpetuated by cuttings, grafts or buds. New varieties may be produced by planting the pits, just as in the case of plums and peaches. Those who have the means and leisure could not employ their time more beneficially to their country or profitably to themselves (since the late act of Congress securing absolute ownership to new varieties of fruit) than to plant the seeds and raise new varieties of this beautiful and valuable tree.

No long or tedious process, no expensive machinery is required to secure the oil. A cheap apparatus, something like our old cider mills, bruises the fruit from the stones and reduces it to a soft pulp. This is separated from the pits and placed in a common lever or screw press, when the oil is gradually forced out of it. The pits are afterwards crushed and afford an inferior article. The oil is received into wooden or earthen vessels where it is permitted to stand from twelve to twenty-four hours to allow the mucilage to settle. The oil is then carefully poured off into barrels, where it rests twenty days, when it parts with any remaining impurities. The oil cake is broken up, mixed with warm water and subjected to a second pressure, when an additional quantity is obtained equal to the first. The refuse is then converted into a valuable fertilizer, so that nothing is lost. One hundred pounds of olives produce about twenty-seven pounds of oil.

Mr. James Lick, the great California philanthropist and millionaire, with that peculiar foresight which enabled him to amass a colossal fortune, did not overlook the olive. With that presence which has distinguished him in all his financial operations, he early foresaw the immense value of this industry and planted an olive orchard of several hundred trees on his place adjoining this city on the southwest, which is just now coming into bearing, at about nine years old. He proposes to begin, next season, the manufacture of oil. Far down in the distant future, when these trees shall have attained their full growth, and produce thousands of gallons of oil annually, men will assemble beneath their cool and refreshing shade and, without a dissenting voice, will pronounce that olive orchard one of Mr. Lick's best and most productive investments.

The expectation of sudden riches has hitherto been the bane of California. The fabulous mineral wealth of the country in the flush times of '49, and the almost equally wonderful advance in real estate, have well nigh turned men's minds. They are even now loth to enter the trodden paths of patient industry. But the lessening chances of speculation, the fall of interest and the rapid increase of a competitive population with Eastern ideas of business, are fast producing that equilibrium which alone guarantees a sound and permanent basis of prosperity. Far-sighted business men are learning to be content with a less, because a more certain, profit. Instead of running after bonanzas, they are investing their surplus funds in lands, buildings and manufactures. And among their profitable investments there is none better than the planting of olive orchards. Besides, this is in the line of that diversified industry which can only render a people great, rich and truly independent.

Many of the lower animals, with a wonderful instinct, lay up provisions for the immediate future, but man, with higher intellectual endowments and a loftier ambition, lays up treasures, not only for the immediate, but for the remote future. This looking forward—this anticipation of the wants of coming generations, can only be indulged in by beings "longing for immortality." This laudable attempt to perpetuate ourselves in the physical surroundings of earth is but an exponent and measure of the "divinity within us," and the more this wise forethought is exercised, the higher we rise in the scale of excellence. Then plant the olive for the future—plant it for posterity—plant it for the coming millions—erect for yourself a monument that will out-last empires—plant the tree that produces the oil of gladness that it may be poured upon the "troubled waters" of the future—plant the emblem of peace.

San Jose, April, 1875.

Curious Epitaphs.

BY ELISA E. ANTHONY.

Eds. Agriculturist: I send you a few epitaphs, humorous and curious, which I found in an old book lately, some of which may afford your readers as much amusement as they did me.

The following epitaph was written by Franklin many years before his death:

"The body of Benjamin Franklin, printer, (like the cover of an old book, its contents torn out, and stript of its letters and gilding) lies here, food for worms; yet the work itself shall not be lost, for it will (as he believes) appear once more in a new and more beautiful edition, corrected and amended by the Author."

Fuller, the well-known author of British Worthies, wrote his own epitaph as it appears in Westminster Abbey. It consists of but four words, but it speaks volumes:

"Here lies Fuller's earth."

Byron's misanthopy vented itself in an epitaph on his Newfoundland dog, which he concluded with the following lines:

"To mark a friend's remains these stones arise;
I never knew but one, and here he lies."

The following is a copy of an epitaph in the church-yard at North Shields, which has been the subject of much laughter to many persons on account of its absurdity:

"In memory of James Bell, of North Shields, who died 16th of January, 1763, aged 42 years. Margaret, widow of the above said James Bell, died Dec. 30th, aged 49 years. She was wife after to Wm. Fenwick, of North Shields."

The following lines were written underneath it with a pencil:

"As in the Scriptures it is said,
No marriages in heaven are made,
It seems that Margaret's ghost did go
To Pluto's dreary realms below,
Where she, poor soul, not long had tarried
Till her friend Will and her got married."

The following quaint epitaph is copied from a church-yard in Finsbury, near Chatham:

"Time was I stood as thou dost now,
And viewed the dead as thou dost me;
Ere long thou'lt lie as low as I,
And others stand to look on thee."

How true is the above!

The following is an inscription on a tombstone in Massachusetts. It is beautiful:

"I came in the morning—it was Spring,
And I smiled;
I walked out at noon—it was Summer,
And I was glad;
I sat me down at even—it was Autumn,
And I was sad;
I laid me down at night—it was Winter,
And I slept."

A gentleman traveling in Europe copied the following lines from a tombstone in a graveyard in Llangollen, North Wales:

"Our life is but a Winter day—
Some only breakfast and away;
Others to dioner stay, and are well fed;
The oldest man but sups and goes to bed;
Who goes the soonest has the least to pay."

In Luton Church-yard, Bedfordshire, an uncourtly voice from the dead to the living speaks as follows:

"Reader, I have left a werld
In which I had much to do,
Sweating and fretting to get rich—
Just such a fool as you."

SAN JOSE, March, 1875.

Household Reading.

A Farmer's Wife I'll Be.

I am a wild and laughing girl, just turned of sweet sixteen,
As full of fun and mischief as any you have seen,
And when I am a woman grown no city beaux for me,
If e'er I marry in my life, a farmer's wife I'll be.

I love a country life; I love a joyous breeze;
I love to hear the singing birds among the lofty trees.
The lowing herds, the bleating flocks make music sweet for me.
If e'er I marry in my life, a farmer's wife I'll be.

I love to feed the chickens, I love to feed the cow;
I love to hear the farmer's boy whistling at his plow;
And fields of corn and waving grain are pleasing sights for me,
If e'er I marry in my life, a farmer's wife I'll be.
I love to see the orchards where the golden apples grow;
I love to walk in meadows where sparkling streamlets flow.
The flowery banks and shady nooks have many charms for me.
If e'er I marry in my life, a farmer's wife I'll be.

Let other girls who love it best, enjoy the gloomy town,
And dusty streets and dirty walks to ramble up and down;
But flowery fields, and shady woods, and starry skies for me.
If e'er I marry in my life, a farmer's wife I'll be.
—[K. V. R. M.

BEAUTIFUL maidens—aye, nature's fair queens,
Some in your twenties and some in your teens,
Seeking accomplishments worthy your aim,
Striving for learning, thirsting for fame,
Taking such pains with the style of your hair,
Keeping your lily complexions so fair,
Miss not this item in all your gay lives—
Learn to keep house, you may one day be wives.

Chats With Farmers' Wives and Daughters---No. 5.

BY "JEWELL."

Now, girls, I want you to feel, that in recounting the experiences of this *pet* farmer's wife of mine, I am simply showing what any one of you *may* do when *you* marry a farmer, provided you only begin right. But to expect the present farmer's wife to change her mode of life, or to suppose the *old farmer* willing to *allow* of such a change, is not to be thought of; and yet it could be done, provided the *will* was strong enough to do it. This is the story she told me of her experience in farm life:

When my husband concluded to go to farming I opposed it—had never lived on a farm and knew nothing of it save its hardships as I had seen them. So we compromised by saying I should have only one hired man to cook for, and only as many cows and chickens as I cared to see to myself. I have a fine lot of fowls and make butter from half a dozen good cows, and always get the best prices; making more money than many who keep twice the number. It is now four years since we started, and if we don't grow rich as fast as some of our neighbors, neither of us are broken down and life has not been robbed of all of its joys.

In haying time and harvesting the grain, we let the work out by contract some years, we putting up a tent and the men feeding themselves. Once we hired the men and furnished rations for them to cook, but it did not work so well. Two years in succession we had the same men come to us. We have two meals a day the year round—breakfast at eight and dinner at two. In summer there was a good two hours work before breakfast and no complaint from any good man. Also, there is always plenty of cooked food in the pantry for a supper if any one wants; but I felt it a duty to myself and children, and would not sacrifice all for money. A living we are sure of. Our expenses are light, though we subscribe for as many books and papers as we can read; but I buy few fine clothes—we don't need them, and I don't aspire to dress as city ladies do, but only for my work and comfort—one suit a year to go to town in is enough.

Such is the substance of her experience, which I thought good at the time, and the older I grow the more practical I believe it to be. The idea that a farmer or his wife should be obliged to work earlier and later than any other laborer is simply absurd. I know they do, but does that make it right? I also know that if they would put the night into work as well as the day they would accomplish more srill. Why don't they do it? They say plants set out at night flourish best. Their answer and mine is, that nature requires rest. If so, then take it—don't overwork if you don't get rich so fast; better be poor and robust than rich and broken down—unable to enjoy life.

And right here let me answer "M. E. O. W." who, I see, takes me up on the "two-meal" question, she believing that farmers need to eat oftener than other people. I will reply by saying that what *has* been done *can* be done again. I know of a farmer in New York State who for years has practised the two-meal system with perfect success—cooking no meat either, and the same gang of men would return three or four years to harvest, liking the plan and food, saying they worked easier and accomplished more than under the old system. I do not give my own experience simply because I am a looker-on, and know no more about the success or failure of either plan than "M. E. O. W." herself, who only tries one way and condemns the other. I do know from observation, however, that most farmers practise the three-meal system and believe it the only way to do. Under the two-meal system, with a simple, light lunch in the evening when needed, the necessary number of hours' labor can be done in the field during the day with less trouble. More rest for limbs and stomach can be taken and enjoyed. Under the three-meal system how about the wives? Where does the rest come in to them? I dined with one the other day, and took notes. The wife had been busy and on her feet since early daylight, and besides getting dinner over the hot stove, waited on the family and helped the children, never sitting down till the men-folks had finished eating and left, when she sat down at the table a few minutes, ate a little cold potato and fried bacon, bread and butter, drank a cup of tea and was ready to clear the dishes off and begin work again. This woman has China help provided too; but then there is plenty for all to do, she says, with dairying, cooking, etc.

No wonder the nursing baby gets fed with bread and milk while mother is busy getting dinner; no wonder the child thrives better on rested cow's milk than on the *tired* mother's milk; and no wonder that so many of our farmers' wives bring their babies up on the bottle nowadays. Amongst the wives in one Grange that I know of, out of seven babies born during the past six or eight months, five are being brought up on the bottle. The mothers are unable to nourish their babies after birth. Query—Can they be perfectly nourished before? How is this for blooded stock, Farmers? What would you say to a breed of cows that could bear but not suckle their young? I do not say a word against the labor of man or woman. All is enobling, provided they do not do too much of it. Dish-washing is as truly necessary and as fine as any other duty when it is well done. The kitchen is, or should be, as truly genteel as the parlor, and every room in the house should be a part of a perfect home. I have seen ladies in the parlor whose discords on a piano wrung my heart, and a poor excuse in the kitchen is just as bad. But bringing the matter to a practical point—surely, by bad management or something wrong in theory, our farming population are not generally the most healthful, the best provided for, the most intelligent nor the happiest, indoors or out. They should be, and may be, too, if the best system of labor, eating, rest, recreation, etc., are adopted and intelligently *lived*, in accordance with reason and right.

Hints upon the Subject of Training Children.

WHAT TO TEACH.—The child should be taught that his eyes, ears, hands, all the organs of his body, all the faculties of his mind are his servants, and that it is his business to see to it that they serve him faithfully, that they report accurately what is passing about him and respond promptly and fully to his demands. Such sentences as "I didn't notice," "I heard but I don't remember," have no business in a child's vocabulary. He should be taught to apprehend clearly, that to say "I forgot" is only another way of saying "I did not care enough to remember." Educate the faculties to prompt action, teach the senses to respond fully to every impression made upon them. When you give a command or communicate a thought to a child, secure his attention, use the simplest and most direct terms and do not repeat them. Superfluous words are demoralizing and reiteration a bid for inattention. Some of us are born clods; more of us become so through vicious training. Make the child self-conscious and you have established an enduring feud between him and his capabilities. Henceforth his feet are an embarrassment to him, and no number of pockets is adequate to the satisfactory bestowal of his hands. He fancies all eyes are upon him, and his very blood turns mutinous and flies in his face without just cause or provocation. It is his right to be unconscious; to develop from within outward as sweetly and unostenta-

tiously as a flower; not to be thrust into notice by having his sayings and doings repeated in his presence, nor snubbed into silence and conscious inferiority by being constantly reminded that "children should be seen and not heard." Hardly anything is more essential in the management of children than the kindly ignoring eye that does not notice too much. I pity the child who is the centre of a blindly doting or injudiciously critical family, whose every saying is repeated, every act commented upon, and where, in consequence, naturalness is impossible.

Polite Children.—"Thank you, Charlie," said Mrs. Brown, as her little son handed her a paper he was requested to bring.

"Thank you, Bridget," said the little fellow a few hours after, as he received a glass of water from his nurse.

"Well, Mrs. Brown, you have the best mannered children I ever saw," said a neighbor. "I should be thankful if mine were as polite to me as yours are to the servants. You never spend half the time on your children's clothes that I do, and yet every one notices them, they are so well-behaved."

"We always try to treat our children politely," was the quiet reply.

This was the whole secret. When I hear parents grumbling about the ill-manners of their children I always wish to ask, "Have you always treated them with politeness?"

Many parents who are polite and polished in their manners toward the world at large are perfect boors inside the home circle. If a stranger offer the slightest service he is gratefully thanked; but who ever remembers to thus reward the little tireless feet that are traveling all day long, up-stairs and down, on countless errands for somebody? It would be policy for parents to treat their children politely for the sake of obtaining more cheerful obedience, if for no other reason. The costless use of an "If you please" and "I thank you," now and then, will go far to lighten an otherwise burdensome task. Say to your son, "John, shut that door," and with a scowl, he will move slowly towards it and shut it with a bang. The next time say, "John, will you shut the door, please?" and he will hasten with a smile to do your bidding.

Putting Children to Bed.—We have seldom seen anything more impressively appropriate than the suggestion made by an exchange relative to the manner of putting children to bed without reproof for any of that day's sins of omission or commission. Take any time but bed-time for that. If you ever heard a little creature sighing and sobbing in its sleep, you could never do this. Seal their closing eyes with a kiss and a blessing. The time will come when, all too soon, they will lay their heads upon the pillow lacking both. Let them then, at least, have this sweet memory of a happy childhood, of which no future sorrow or trouble can rob them. Give them their rosy youth. Nor need this involve wild license. The judicious parent will not so mistake my meaning. If you have ever met the man or the woman whose eyes have suddenly filled when a little child has crept trustingly to its mother's breast, you may have seen one in whose childhood's home "dignity" and "severity" stood where love and pity should have been. Too much indulgence has ruined thousands of children—too much love not one.

Remember.—Whatever you wish your children to be, be it yourself. If you wish them to be happy, healthy, sober, truthful, affectionate, honest and moral, be yourself all these. If you wish them to be lazy, and sulky, and liars, and thieves, and drunkards, and swearers, be yourself all those. As the old cock crows, the young one learns. You will remember who said, "Train up a child in the way he should go, and when he is old he will not depart from it." And you may, as a general rule, as soon expect to gather grapes from thorns or figs from thistles, as to get good, healthy, happy children from diseased, lazy and wicked parents.

Scolding.—What good does scolding do? It does no one the least service, but it creates infinite mischief. Scolded servants never do their work well. Their tempers are roused, as well as the mistress's, and they very often fail in their duties at awkward moments, simply to spite her and to "serve her out." Very wrong in them, doubtless; but human nature is frail, and service is a trying institution. It does no good to husband or child, for it simply empties the house of both as soon as possible.—*N. Y. Observer.*

Stock Breeder.

Utility Above Fancy in Breeding.

If we were to judge of the character of our stock breeders by the prices occasionally paid for fancy animals under the influence of unusual competition or wild excitement, as at the New York Mills sale of last year, for instance, we should undoubtedly do great injustice to the average American breeder, who is, after all, a thorough utilitarian, and knows that real merit will win, in the long run, in this, as in every other kind of business.

Mr. J. H. Pickerell, of Illinois, the newly elected President of the American Association of Short-horn Breeders, is one of the right kind of men to bring the ideas and practices of the Short-horn breeders down to a solid, hard pan foundation, if they are in need of such training, as it has certainly seemed to us that they have been for a year or two past. His lecture, delivered at the annual convention of Short-horn breeders at Springfield, Ill., last January, is one of the most sound and sensible productions we have read on the subject of breeding for a long while, and we commend it to the attention of breeders everywhere.

No one who breeds Short-horns intelligently, either with an eye to profit or pleasure, but has his fancy, both as regards the real, living, moving animal, and the paper Short-horn, with pure ancestry pedigreed. Then there are particular fancies in regard to the horns, their size, shape, length, color; points in or points out, points up or points down; fancies about the mane, its shape, size and color—tints that the skin should be; size of the head, length of the face, width, etc. Then the jaws, eyes, ears, throat-latch, etc. The same in regard to long necks and short necks, thick necks and slim necks, chubby necks, etc.; shoulders set right or obliquely, thick or thin, heavy or light, rough or smooth, points bare or covered; brisket prominent, smooth, wide, narrow, low down, plump or flabby; crops thick or thin, sharp, high or low; thick or light "through the heart," long ribs or short ribs, high sprung or low sprung, ribbed up close or long coupled; thick loins or light ones; same of hips and flanks (fore and aft); rumps up or down, square or peaked, long or short, smooth or straight; quarters long or short, square or cut in; twist full or straight, twisted in or twisted out; hind legs long or short; bones fine or coarse, straight or crooked; tail fine or coarse, long or short, with the bush do.; white or red; hide thick or thin, mellow or hard, yellow or white; hair coarse or fine, long or short, thin or "full of hair."

Then the color, from plain white to fancy red, with all the tints and shades imaginable between the two. Then the general "make-up" and finish, as a whole; style and carriage. Fancies about pedigree, whether of this stain (pr family) or of that; whether one cross, six crosses, or sixteen, makes a thoroughbred, or a full-blooded; wether, if the dam runs to a certain starting point, with the sire of some other blood, makes it more of that family or vice versa; or whether, if the pedigree is right, it makes any difference about the animal at all. Then there are prejudices in favor of and against everything named, and many more, perhaps. How far do these things bear out, for or against, the real or useful, to their advantage or disadvantge? That's the question.

The intrinsic value of the horns, is, perhaps, about twenty cents—worth but little to the animal for protection, as a "muley" frequently masters the whole herd. Their real value is as an index to the breeder, which is very frequently—nearly always by our awarding committees at our fairs—taken the wrong way. As many a good animal has been discarded, thrown out, or sacrificed, for having a heavy horn—placed behind an animal having a delicate, steer horn—when, perhaps, in real merit the first had hundreds of pounds of meat in valvable parts more than the other. While we fancy horns of a peculiar kind, we must be careful not to let our prejudicea run away with other merits of real value, for while a heavy, coarse horn may not be an advantage, or desirable, a light, delicate one, other things being equal, should always be objected to in a bull. The nose of itself is valueless when it comes to the block. All admit that the most fashionably bred and fancy pedigrees occasionally show black noses.

In regard to the color, it has been said that the fashionable color of to-day was once an actual objection. Then the color does not establish the blood; nor is there any positive proof that the quality of the meat is governed by it. May we not well ask, Is there anything more than prejudice in the color of the nose? Yet fancy sacrifices many good animals on account, not only of a black, but of a smutty nose. The head of a dead animal, of itself, is worth but little, and like the horn, is more of an index to the living animal than real worth. It is true, in weight, it amounts to something more than it comes to at the lowest price paid for beef. Then after the true value—which, like the horn, is often misconstrued—in the living animal is considered, we should not let a fancied defect (of course I do not allude to a malformation, which should always be discarded in breeding animals) prejudice us too much against other real merits of the animal. The throat-latch (to use a common expression) is required by fancy to be light and slim, and for a little chubbiness the whole animal is made to take a back position, while it is very generally a good index to a good feeder and a thick animal. It seems curious that our half-fledged Short-horn fanciers generally see more to condemn than to commend, very frequently sacrificing the real merits for a few fancy points. Fancy puts great stress on a long, slim neck—one that can hold a high head. Reality says that a neck that is long enough to reach to the ground to drink and eat is long enough. Unnecessary weight is objectionable, because it is low priced beef, and the less of it the better, other things being equal. In our prejudice we forget that a thick, short neck sometimes weighs less than a long, slim one, besides being generally carried by a body that corresponds, especially as to thickness. Fancy, perhaps looks over more and carries it further into the ranks of breeders in the shoulders than most any part of the animal.

In our prejudices against minor defects we frequently overlook more real merits and pass them by, letting light, sharp tops, bare points and coarseness generally in the shoulder, take the lead. Really, there is about as much difference in the value of the shoulder by the way it is formed, as any other portion; a poor, thin, coarse shoulder is a loss always in point of real value, behind a good or smooth one, that nearly approaches, in point of value the higher-priced beef. Here, too, we get great weight. Consequently, the shoulder should be considered a more weighty matter

than some of the light fancies. Fancy places great stress on the brisket. Reality (the butcher) says it is not high-priced beef, and, intrinsically, worth but little. A long, prominent brisket adds weight to low priced beef with out adding to the real value as an index to a broad chest and strong constitution. Fancy makes a strong point in favor of a heavy brisket. The fore legs—and hind ones too—fancy overlooks sometimes, and substitutes mill-posts in size and many inches in length. Reality says that soup is good, but costs too much to make coarse shins profitable as they never sell for what they cost in the carcass. Great weight in the crops adds to the value of other parts per pound over light ones. Fancy and prejudice frequently overlook this fact—forgetting that light crops are classed as low priced beef, while heavy or thick crops, besides taking the weight from the paunch and offal, add to the weight of the high and valuable parts. Fancy, and prejudice also, frequently makes great sacrifice in the heart, as the light and delicate points so much admired, generally carry the same delicate proportion to the heart, the most vital part of the beast.

If the animal is light "through the heart" and behind the shoulders, the action of that organ will be hampered and the robustness of the animal will be diminished. Fancy overlooks many faults in the loins and hips; while usefulness says that the ribs should be well sprung—"round as a barrel"—and not too short; a little paunchiness can be overlooked, as a good feeder generally has some place to put it. Loins are fancy cuts in reality, and should, if thick and broad, even if a little arched, overbalance many minor defects of other points. Broad loins necessarily make wide hips, but they should not be rugged, or rough—not too prominent, especially in a bull.

Flanks are quite important, if good, and of but little importance if light. The fore-flank especially should be full, to give room for the internal organs, and to add to the value of the plates. A low, thick hind flank is also very desirable, adding weight without occupying space that is needed for anything else. Great weight is added to valuable parts by having the rumps straight and square, carrying their width well down to the quarter. Peakedness is really objectionable, and, if it comes from hips too wide, they had better be narrowed. Fancy frequently protrudes the quarters—rounding them up behind, which is frequently done at the expense of their length, making them "cut in" and too short, besides adding coarse meat. The twist should be well let down, and full, as daylight is not much needed at that point. The quality of the quarter is much enhanced by being increased in weight in a few points at no expense of space. "Steak" comes down better in a straight hind leg than in a crooked one. Thigh bones are necessary, but might just as well be covered with meat as be bare. The shorter from the ground to the hock, and the longer from there up the better. As hind leg soup is no better than fore leg soup, the less the better. Fancy runs wild on the tail, condemning an animal frequently on account of its length or shortness, even the brush coming in for a full share of condemnation or praise—I suppose on the ground that "the beautiful should be encouraged, as the useful will encourage itself." "Ox-tail" soup is about its only use—after fly-time.

Fancy "goes in" on the hide with no little prejudice for or against certain imaginary qualities that are frequently taken as superior to the best forms and largest preponderance of valuable parts. Especially is the fancy of feeling qualities, when taken against the form of an animal, overestimated, as many thick or hard-hided animals that are well formed will testify by their quick growth and heavy weights. The quality of the flesh is what is wanted, and reality says that the feeling quality of the hide does not always determine that. Of course the color, thickness, pliability, etc., of the hide is more of an index than a reality of itself. A good covering is needed, and that is why the animal has a hide at all. It is true we take advantage of it, and sometimes get our foot in it in more ways that one. The same might be said of the hair, for, after nature is provided for, the balance is nearly all fancy. The color of the hair, varying from white to red, which are sure tokens of Short-horns, is much more fancy than reality, and our prejudices are governed more by this difference than men are willing to acknowledge. So in regard to pedigrees. Fancy would lead us to a different conclusion, from the way it runs crazy after some old bull that lived perhaps a hundred years ago, with no more than a number for a pedigree—condemning others, without any more reason, for doing the same thing. Reality says that pedigree fanciers live in "glass houses" and should be careful about "throwing stones." Reality says that pedigree and form constitute the animal, and that either without the other will surely "play out" in the end. How far we can follow fancies and make stock profitable is a question that time alone can settle. That many are guilty (more or less) of following fancy to the sacrifice of reality, no one can successfully deny. For my own part, any fancy (or whim, if you please) that I can follow, without sacrificing usefulness, that will please my customers—that they are willing to pay for—I intend to follow just as long as they are in that notion; but I am not willing, while fancy demands a sacrifice of usefulness, to follow in the fashion, even at the risk of being called an "old fogy." These points may be too strongly presented—overdrawn. If so, the writer only has to apologize, because he thinks there is danger enough already to warrant it. He would suggest that others make a note thereof, and then do as they please, of course.—*N. E. Farmer.*

High-Priced Stock.—English agricultural journals are having quite a warm discussion on the subject of the high-prices being demanded and paid for Short-horns of certain strains. The *Agricultural Gazette* thinks the matter entirely overdone, while the *North British Agriculturist* takes the opposite side. It says: Those high-bred and high-priced Short-horns which have of late come in for so much abuse at the hands of certain agricultural journalists, cost perhaps too much money, but that breeding entirely from certain strains is a mistake, is open to question. Take two representative bulls, the Duke of Devoushire's Duchess bull, and Lord Erwin; say nothing about pedigree, the latter may in a sense be the best beast; but there is no man, half a judge, not to speak of pedigree, would prefer him to the Duchess bull.

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So it is with Bates and Booth cattle of high descent. The big prices are the very thing that keeps the stream pure and helps to fertilize the whole Short-horn world. There is a certain potency in a small quantity of this high-bred blood—latent it may have been in the original—but when mixed with that of more plebian origin it finds its way into those thick-fleshed animals which "painstaking breeders" like to see.

English Short-Horn Sales for 1875.—We copy the following list from the *Mark Lane Express* and publish it as a guide to breeders in fixing upon the dates for the local sales: April 28, part of Col. Kingscote's herd at Kingscote, Wotten-under-Edge, Gloucestershire. April 29, part of Mr. Bowly's herd, at Siddington House, Cirencester. April 30, probably the whole of Mr. J. A. Mumford's herd, Chilton Park, Thame. August 25, the large portion of the Earl of Dunmore's herd, Dunmore, Stirling, N. B. September 2, the entire herd (about 100 head) of the late Mr. Torr, of Aylesby Manor, Grimsby, Lincolnshire. September 7, part of Lord Sidmersdale's herd, Lathom House, Ormskirk. Sept. 9, Short-horns belonging to Messrs. Foster and More, near Carlisle. September 10, part of Sir Wilfred Lawson's herd, Brayton, Carlisle. September 22, part of Mr. H. J. Sheldon's herd, Brailes House, Shipston-on-Stour. September 23, Mr. J. W. Philips' Short-horns, Heybridge, Cheadle, Staffordshire.

It has been decided by the stock-breeders of Connecticut to hold a Spring meeting as well as a Fall meeting this year. The premiums at the former will amount to $12,000, and at the latter about $10,000.

Dust for the Animals.

A writer in the *Country Gentleman* thus "goes for" the advocates of combing and currying:

I do not advocate dirty surroundings, but merely deny there is any benefit in grooming young or breeding stock generally, and maintain that if sheltered by night and allowed to roam about by day, then evil instead of good arises; for I never knew an instance of lice hurting well-fed and healthy young stock when suffered to go out and about daily, whereas, in many instances I have seen colts and calves which have been curried and brushed, that have swarmed with vermin, and the owner has been obliged to dress with poison to get rid of them.

Sand and dust rubbed into a lonsy animal's coat will, by a few applications, cause lice to disappear, for the animal will shake itself and they will fly out with the dust, the same as fleas, etc., are shaken out of a hen's feathers after she has dusted herself in soil or ashes. See, too, how horses and mules will roll every opportunity, and by turning over on their backs, try all they can to have some dust on every part of the body, thus proving beyond any question that some dust is gratifying to the feelings of the animals. Yes, let any gentleman have any or all of his nags, draught horses or mules cleaned to look their very best, and then turn them out of doors without halter upon them, and if every one of them does not lie down and roll in the most dusty place convenient, I will forfeit my reputation as a judge of what is good for live stock.

Flax Culture.

Flax is a very quick crop—the producer can receive his money within four months from the time of sowing the seed. If seed alone is wanted, the best yield can be obtained from dry, rolling, moderately rich land. If straw is wanted, choose, moist, rich land, such as our creek and river bottoms. The land should be clean from weeds. On dirty land, the expense of raising and harvesting the crop will be more than doubled. The soil must be put in the finest possible condition, and be made smooth and mellow before the flax is sown. The seed should be covered with a brush harrow or roller, as, if covered too deep it will not come well. A heavy rain immediately after sowing will cover the seed sufficiently, provided the soil be very fine and mellow. Great care should be taken to procure seed of good quality. It should be fully matured, plump and glossy, and free from foul seeds. If good seed is desired, sow from sixteen to twenty quarts to the acre. If sown two thick the heads will be smaller and not so well filled with seed.

Flax should be cut as soon as the bolls begin to turn brown; as, if left standing too long, there will be a great loss of seed in harvesting. It may be cut with almost any reaper, and if raised principally for seed, there is no necessity for binding it, but it may be left in gavels until dry, when it is ready for threshing. It is better to thresh early. For threshing, some use a flail; others tramp out the seed with horses; while others use the common threshing machines, with some slight alterations. The average yield is from twelve to fifteen bushels per acre.—*Ex.*

Poultry Yard.

Fowls---The Kind to Keep.

My "fancy for chickens," writes a correspondent to the *Country Gentleman*, dates from my boyhood, and since then I have been a close observer of their habits, and during the past ten years have had opportunity to test, by actual experiment, my long-conceived notions of the important place they hold among the productive elements of the farm. Experience has convinced me that there is scarcely any interest of the farm that will pay so large a return on the investment and labor bestowed upon it as will the keeping of the domestic fowl in flocks of 25 to 200, the number within these limits depending upon the accommodations, extent of territory, and care devoted to them; and, farther, that the egg-producing department of the poultry yard is that in which lies the greater profit. There is an undoubted profit in breeding them for the spit, but so much more in keeping them for the production of eggs, that I consider the former object secondary to the latter. Please accept the statement of the fact that the past five years' management of a flock averaging 175 shows an annual profit of $350 from eggs alone. Assuming the proposition that they will pay largely, it behooves us to consider the merits of different breeds, and discover, if possible, the best variety for laying. Under this head I propose to give you a leaf from my diary.

Some ten years since, I bought with my small farm the poultry on it, about fifty head of common fowls; at the same time, I procured from another source a trio of Black Spanish fowls, from which I reared, during the season, about twenty pullets. The change from city to country life gave a keen relish to everything fresh and rural, and we "fared sumptuously" every morning on the fresh laid eggs; but with the fall of the leaf our short-lived pride of the table soon came to grief. Three eggs a day! What a beggarly show! Wheat screenings, table scraps, sheep's plucks and oyster shells in vain wooed dame Partlett to fecundity; but with the December days, a gradual increase in the yield was developed. The combs of my Spanish beauties, "mantling high" with the red emblem of maturity, blazoned forth the secret of the change, and a bountiful supply of fresh laid eggs once more graced our table. Selected only as handsome specimens of the feathered tribe, the great superiority of the Spanish as layers was not at first suspected; but I immediately began my experiments, and in the following Spring I found that six Spanish hens, kept apart to secure purity of eggs for hatching purposes, gave an average of three eggs each in four days for the space of six weeks—while the common fowls, under similar circumstances, laid only every other day.

In my judgment the best three varieties of layers known to us are the Leghorns, Spanish and Hamburgs, and first of all I place the Leghorns. The eggs of the Hamburgs are too small, while the Leghorns lay a large, plump egg, and they mature much earlier than the Spanish. Chickens hatched in the Spring will mature and commence laying earlier in the ensuing Fall than the Spanish, and this is a great consideration, since it is on these Spring pullets that we must rely for our Fall and Winter supply of eggs. I believe the Leghorns will lay the heaviest weight of eggs in the year of all breeds in proportion to their size and food consumed, while the Brahmas, will produce the lightest with like relation to size and food consumed. There is a difference in the laying qualities of fowls of the same variety, and I have noticed that those with the largest combs and wattles, or great predominance of the "red" in the face and about the head are invariably the best layers.

Ducks.—A farmer's boy writes us from East Rindge saying that he has a pair of ducks, and asking how he shall take care of them so as to make the most of them.

About a year ago we published what we knew about ducks, but as this seems to have escaped the attention of our young friend, we don't mind repeating some of it. In the first place then, you want to remember all the time that the duck is a great feeder. He is not very particular as to what he eats, but he wants a great deal, and when he has it, grows very rapidly and keeps fat all the time. This Winter your ducks will eat almost anything which you can give them from the table, crusts of bread, potato peeling, old turnips, bits of meat, and "swill" generally, besides grain. Next Summer they will catch and eat an innumerable number of bugs, worms, snails and insects of all kinds, and this is one great reason why we like ducks; they also relish fish, frogs and tadpoles, but are not grass eaters like geese. This Winter you want to keep them where they can have a warm place to sit nights and a chance to waddle around in the sun days. A tub of water to which they can have access will furnish them all the water they need, and some kinds will get along well without even that. We would not shut them in a small pen as it would soon become nasty and foul.

They probably will not lay next Winter, but by April they should commence and lay an egg every day until Fall. They are apt to drop their eggs anywhere they happen to be, but if encouraged to go to the barn for feed, and if furnished a good place, can generally be made to lay there.

They are poor hatchers, careless of their business when first hatched. We would therefore take their eggs and set them under hens. The eggs hatch in 31 days and they require no attention but what the hen will give them. When once the hen is sitting leave her alone. When once the ducklings hatch, feed them with boiled eggs and flour, and crumbs of bread soaked in sour milk, for a few days, and after that give them boiled meal, boiled potatoes, cooked bran and any bugs or angle worms you can find. For the first week or ten days, or longer if the weather is not fine, keep them confined in pens where they can only get at water enough to drink. If they are let loose they take to the water and get cold and die. More ducklings are killed by going too early into the water than any other way. For this reason do not let them out when the grass is wet. After they are three weeks or two months old, they may be let loose to forage in the garden or field, but they should be brought home every night. Do not give them raw food except bugs and worms. Ducks need water in the Summer, but will do nicely without a great deal. As we have said, when well fed they grow rapidly, and are ready for market early. *Mirror and Farmer.*

Curd, made by scalding milk to separate the whey, is as good feed for young ducks as can be procured.

Selection of Turkeys for Breeders. What I have to say will be addressed more to farmers than fanciers. It is to be supposed that fanciers know enough to keep the best, while most farmers (in this vicinity, at least) sell the largest and best, and keep over a little late turkey that will not sell.

I think the bronze is the best breed. They are very hardy, grow to a large size, and have splendid plumage. The selection in breeding stock is of the utmost importance. I would not keep over a young gobbler weighing (at six months) less than 18 pounds—20 or 25 pounds would be better—and the hen to weigh at least 12 pounds at the same age. A gobbler weighing 20 pounds at that age, is cheaper at $10 than one weighing but 12 or 14 pounds would be if given to him.

I remember the first Bronze gobbler I bought cost me $7.75. He then weighed 18¾ pounds. I felt rather cheap about it, but it was the best investment I ever made in poultry. The December after he was one year old he weighed 35 pounds, and he now weighs 40 pounds. I would select a gobbler that was broad across the back, short legged, and square built. A tall, stilty, thin-built bird is not worth keeping—always remembering that a young Bronze is comparatively tall.

The hen should be short legged, square built and long bodied. I have read of young hens weighing 18 or 20 pounds, but have never seen them. If any one has any such hen to sell, at any price, I should be glad to hear from him. It is just as much trouble to get a turkey old enough to take care of itself that will weigh but 6 or 7 pounds, as it is one that will weigh from 12 to 20 pounds. Another thing, most farmers kill the old birds in the Fall. Now, I consider old birds worth double (for breeders) the price of young ones. If I had an old hen that took care of the young turkeys, was all right otherwise, I would keep her until she was at least five years old. And a gobbler that proved a good bird at maturity, I would keep as long. The young turkeys will be larger and stronger when hatched, and are easier to raise.—*Ex.*

The Best Poultry for General Use.—In answer to this question, a correspondent of the *Poultry World* says he has arrived at the conclusion that the Brahmas, all things considered, are the best for general purposes, for the following reasons:

I have found them the best Winter layers if started early in the season; this is the time of the year when eggs are in the greatest demand, and the price then realized is fully double, for ordinary family consumption. I find that it costs but little more to keep them in Winter than in the Summer season; and for limited premises, where fowls cannot enjoy a good range, the excess in any portion of the year varies but slightly.

Good care under all circumstances, and at all times, is a prime necessity to success in breeding fowls. These larger birds need no better treatment than do the smaller varieties. At an early age, the cocks are ready to kill, and they average much larger chickens for market uses, at a time when dead poultry brings the best price in the cities, than do small breeds.

As mothers, the Brahma hens cannot be excelled. The chickens are hardy, and make a fine table fowl if properly fed and strictly cared for from the shell; and, when in good condition, in the early Fall, they will dress from ten to twelve pounds a pair (often heavier), which is almost twice the dead weight of average marketable chicks, now-a-days, of the common varieties. This extra weight will far more than compensate for the extra cost of good care and keeping; and the Brahmas may be limited to narrow confinement, by enclosure with a four-post high fence, which is a consideration of consequence in many locations.

Crossing Breeds.—I have a flock of twenty-four hens, a cross mostly of White Leghorn and the Light Brahma. They have laid fairly during the past Winter, but in three days of the last week in February they laid respectively fifteen, twenty, and twenty-one eggs. Can any one tell me of so large a yield of eggs from this cross thus far? The produce is hardy, of good size, and fuller in the breast that the pure Brahmas, and almost as broad on the back and in the rump. The legs are nearly free from feathers, which is a great improvement to my eye, and they are not such inveterate setters as I find the Brahmas. In fact, some do not want to sit at all, and others that do can be broken up in three or four days, instead of as many weeks, as it has often taken me with pure Brahmas, and I have tried every method for this purpose I ever heard of. This cross-breed of hens has proved superior to my Houdans in laying the past winter.—*A. B. Allen, in Country Gentleman.*

Remedies for Hen Lice.—As the Summer heats increase hen lice multiply and the broods need constant looking after. It is a safeguard to put tobacco in the nests of sting hens. Refuse tobacco or old stems will answer the purpose. If lice are already in the hennery make a strong decoction of tobacco and apply it with a syringe all over the inner surface. Sulphur sprinkled in the nests and about the roosts is also a good remedy. Insects do not like the smell of brimstone. Another remedy much used recently and very easily applied is kerosene oil. Strips of listing from the tailor's shop are tacked upon the roosting poles, and these are saturated with the oil. The hens upon the poles get some of this oil upon their feathers, and wherever it touches it drives off the insects or kills them. Carbolic acid is a cheap destroyer of insect life. It is largely diluted with water and applied to all parts of the house. If, in very old houses, one application is not sufficient, repeat it.—*X.*

A lime wash, made of tobacco juice and lime, is also good to drive away lice from buildings and roosts.

Porcine.

More Hogs and Less Wheat.

A Minnesota farmer writes the *Farmers' Union* some hard sense under this head, and had it been written for Cahfornia farmers it could not have been worded much better. Read it, and consider well the facts.

Why *don't* we raise pork? I cannot tell, unless it be that the goddess Ceres has so fascinated and blinded us by her charms that wheat, and wheat only could we sow and reap on our virgin soil. But the goddess suffers a terrible eclipse this year, and let us quietly break from her leading strings and discuss the *pros* and *cons* of raising swine for profit after the example of our thrifty neighbors.

It must be admitted the price of pork fluctuates greatly, but none can doubt it will bear a good price for two or three years. Besides we should at least supply our *own* rapidly increasing wants at all times. It is a burning disgrace to us farmers that we have to import pork, bacon and lard. We belive, on the contrary, that it would be a wise and prudent policy for our own farmers to go into the business largely, and export this product by millions of dollars annually. The large and increasing export to Europe will keep up a fair market, and we can ship pork, bacon and lard much cheaper than wheat. But let us pass to the next question—

HOW SHALL WE RAISE THEM?

First, how *not* to do it. Don't attempt to hang up high hopes and expectations on the big-boned, long-legged, lean, slab-sided, two-forty racers; or even the common scrubs of slow growth, but ravenous, all-devouring eaters. Don't keep only the breeding hogs over Winter. Don't freeze them by cold, wet, unlittered pens, and don't starve them with wish-washy, homeopathic doses.

Commence with the best well-bred grade of pigs you can easily find of any of the early maturing breeds. These are so widely diffused there is no excuse for keeping inferior ones. Breed to a thoroughbred male of the most hardy and early maturing blood—we would choose Berkshires, and be sure you are not deceived by men who will sell grades for pure breds. The young pigs should be dropped in March or early in April, and give them, without fail, a well-littered, warm pen. Give them the best start in life you can. They will pay you richly for care and good feed. Have a clover lot in early Summer to turn them in. In August turn them into the corn (grain) field, fencing off a small area by a hurdle fence. After harvesting this lot move the fence round another lot, unless you choose to follow up with the store hogs. Keep changing as necessary your hurdle fence, and watch the porkers grow fat. You may give the finishing touch to them in your pens if you keep into December. Kill, cut, barrel, smoke and try out the product *yourself*, and learn to do it well. You then reap the whole harvest, and save the middlemen's profit.

Two hundred and fifty or seventy-five pounds of the sweetest, nicest quality, turned when eight or nine months old, will swell out the pocket book to a greater rotundity than wheat or beef—and think of the little labor and expense. Try it, farmers. But, remember, the keystone of success is the use of a *pure-bred male* of one of the improved breeds, and *generous care and feeding.*

Improvement in Breeding Swine.—At all our fairs, at all our markets, and upon the premises of all good farmers, we see the most surprising evidence of improvement in our stock of hogs. Pure blood has, within the last twenty or thirty years, done more to improve our swine than any other class of domestic animals. Several reasons may be assigned for this: In the first place, the breeding of pigs is an easier and more simple matter than the breeding of horses or cattle, or even sheep. We breed here for flesh and fat only; and owing to the extraordinary fecundity of the species we may modify the characteristics of a variety in a comparatively short period. In the next place, as hogs make no other return for their keeping than that derived from their carcass when slaughtered, the importance of the best form and quality for the production of the most profitable carcass, is more manifest and pressing here than with any other species. It requires very little intelligence to discover that to produce pork, bacon and lard profitably, we must have a variety of pigs that can be brought to their average maximum weight at from ten to fifteen months old—experience has demonstrated that it will not pay to keep them longer. For this purpose we must have a round, straight carcass on short legs. Medium sizes are better than very large ones, more economical, and produce better pork, selling usually for the best prices.

The farmers of America are entitled to great credit for sagacity in resorting to superior blood for the improvement of their swine; and when we reflect how extending and widespread has been the benefit, and how self-evident its great value, we wonder that the same judicious practice has not been resorted to in the improvement of other stock. As we have said, the beneficial results are more immediate here, and secured at less expense than where pure blood is resorted to for the improvement of cattle; but the necessity is not greater in the one case than the other, though it is more obvious.

For twenty-five to fifty dollars we may secure the best thoroughbred boar, and if he has work enough to do he will more than pay for himself the first season. For one hundred and fifty to three hundred dollars a good thoroughbred bull may be had; and he, too, may be made to pay for himself in a single season. While the keeping of inferior cattle does not, to an unobserving farmer, appear so self-evidently unprofitable as the keeping of scrub pigs, the loss is, nevertheless, greater, as the rearing and keeping of cattle involves so much more expense.—*Cor. National Live Stock Journal.*

Dressing Black Hogs.—If care is taken in scalding black hogs they can be dressed as white as any white hog. It is a well known principle that all black substances absorb heat. Hence in dressing black hogs the water should not be so hot as in scalding white ones. If this simple rule be observed, there will be no difficulty in dressing black hogs. Instead of this color being an objection, I consider it as an advantage, for the skin of a black hog will always be found to be smooth and glossy, free from cutaneous eruptions and always clean.

The Berkshire Pig.—The old Berkshire hog was held in very high esteem for many years, centuries perhaps. It was regarded as the best pig in England, and was naturally selected as the basis of the wonderful improvements which have built up the reputation of the modern Berkshire on such a basis of intrinsic good qualities. It is, no doubt, true that much of the improvement is due to the Chinese cross.

Sidney, a popular English writer on swine, says: "Among the black breeds, by universal consent, the improved Berkshire hog stands at the head of the list, either to breed pure or to cross with inferior breeds. The Berkshire was originally a large breed of a black and white and spotted sandy color. The 'late' Lord Barrington, who died in 1829, did a great deal towards improving the Berkshire breed, and the improved Berkshires are almost all traced back to his herd. They are now considered by Berkshire farmers to be divided into middle and a small breed. If first class they should be covered with long black silky hair, so soft that the problem of 'making a silk purse out of a sow's ear' might be solved with a prize Berkshire. The white should be confined to 'four white feet, a white spot between the eyes, and a few white hairs behind each shoulder.'"

The Berkshire, now so far improved of itself, has been extensively used to give size and constitution to other breeds, to the Essex, etc. It must be regarded as a great and desirable acquisition to our American swine, and we are glad to see so many fine specimens at our fall cattle shows.—*Mass. Ploughman.*

Money in Hogs.—We have repeated that there was money in pork if farmers would raise good stock hogs and take advantage of the improved breeds introduced into our State. We are furnished with proof of this as follows: Mr. Joseph Oppenheimer, of Colville, Oregon, two years ago purchafed a good Berkshire boar pig of S. G. Reed, for the purpose improving his stock of hogs. He recently killed twenty graded hogs 18 months old and their average weight, dressed, was 366 pounds—two of them weighing respectively 470 and and 478 pounds. Who can doubt, then, that it will pay to improve our breed of hogs? It is a great mistake to suppose that hogs can only be fattened with wheat. Every farmer should have a boiler conveniently fixed to cook hog feed, and then he could utilize all his root crops, boil potatoes, squashes, apples, etc., add a little chopped wheat to strengthen the diet, and so insure hogs well and cheaply fattened. There is no better opening for a sure thing in connection with farming than for every farmer to raise at least twenty hogs and fatten thus each year. We even assert that he would not lose money on them if he had to feed them wheat worth a dollar a bushel. But the first thing to do is to improve the stock of animals.—*Willamette Farmer.*

Wheat or Corn as Feed for Hogs.—A correspondent of the Kansas *Farmer* says a large hog feeder, in Illinois, informs him that he has produced eleven pounds of pork from a bushel of corn, and seventeen pounds from a bushel of wheat. He grinds the wheat, pours boiling water over it and allows it to stand some hours.

The Most Nutritious Food.

The following, according to the celebrated Dr. J. C. Beck, shows the amount in pounds nourishment contained in a hundred pounds each of the article of food as stated below:

Corn, 97 lbs; peas, 93; beans, 90; rice, 90; wheat, 85; barley, 83; rye, 80; bread, 80; meat 35; beets, 18; carrots, 14; turnips and greens, about 8.

See how many of the family can remember and give the per cent. in the order as above.

Sheep and Goats.

What Breed is Best?

THE best breed of sheep for any given climate and kind of pasturage is a question that is worthy of some discussion, as wide difference of opinion prevails among sheep men. The breeders of each variety seem to think their favorites the right ones always. But the experience of those who are engaged in the business for profit is probably the most conclusive, especially when the business is intelligently conducted with a single eye to success.

It has been demonstrated that the Mexican sheep, graded with Merino, produces too short a staple of wool, when sheared twice a year, to bring a remunerative price. And, as there are two seasons of short feed, and the wool is consequently weakened thereby, it is necessary to shear twice to avoid the weak place in the fleece which would render it worthless for fulling. If our sheep men could so contrive as to feed their sheep in the Fall, and prevent the "break in the wool," it would be best, undoubtedly. But there are large sheep ranges that are now occupied in such a manner that the saving of feed for them is not deemed practicable. Shearing them twice a year is the settled custom, and a breed of sheep that will grow a longer fleece than the pure Merino, or Merino mixed with the common sheep, is needed for open ranges.

Some of our experienced breeders are now mixing the Cotswold with the Merino to give length to the wool, and they find it a good thing to do. The Cotswold not only gives a greater length to the wool, but also gives a heavier carcass, making the weathers much more profitable as mutton sheep. By selecting the finest sheep for breeders, and carefully crossing a few times, until a uniform texture of wool can be obtained throughout the herd, it is found that one-fourth to one-half Cotswold with Merino produces the required length, without giving coarseness enough to materially lessen the value of the fleece. The experience of McCracken & Lewis, of San Jose, who own several flocks of sheep, and who have been experimenting for some years in this direction, is, so far, conclusive of the superior value of the cross of the Cotswold with the Merino and common sheep over the cross of the Merino and common sheep alone, as generally bred. Our climate and sheep ranges are peculiar, and it needs a good deal of experience to discover the best exact crosses for greatest profit where sheep must depend entirely on pasturage for subsistence.

But when farmers generally find it profitable to keep a small flock of sheep upon their farms, (as they surely will, in time, in California) it will probably be found best to keep the sheep in good condition the year round and shear once a year. Then either the long wool and heavy carcass or the very fine wool sheep will be found best in their purity, as there will always be a demand for the finest staples at high figures, and also for the long, strong combing wools at good prices.

But, until the time comes when it will no longer be profitable to occupy large uncultivated ranges with sheep, of course, it is a matter of a good deal of concern to such large sheep owners to get the best breeds and crosses to suit their purposes.

THE MERINO.—This is what a writer in an Eastern paper says in favor of the Merino sheep:

For wool growing, the Merino has no equal, and the mutton standpoint is not so objectionable as some would have us believe, either in quality or quantity.

Where the proper breeding has been given to produce heavy carcasses, the Merino has and always will produce more mutton to the acre than any other breed. It is the poor man's breed, for they will live and do well on less food than any other breed.

For the production of fancy wool, the Southdown, and perhaps all the Downs are to be classed under this head, so far as quality of mutton goes. Some of the Downs are better for wool than the famous Southdowns. Those above, kept up to the standard of breeding and feeding, are very profitable, and are unquestionably the most fancy looking sheep in a flock of from twenty to thirty-five.

The combining of wool and mutton is met exactly in the Cotswolds, Leicesters and Lincolns. Their large, heavy carcasses covered with long, lustrous wool, seem the very embodiment of sheep perfection. These, like the Downs, required and demand rich pastures and abundant food. Their breeding qualities are not so good as the Downs, and seldom do well in flocks of any size—say from twenty-five to fifty, is as many as are profitable to keep in one flock. Their mutton is too fat for the American taste, but their early maturity and great size will continue to make them popular, especially while the demand for combing wool lasts. There is no reason to suspect any decline, either on their mutton or wool. Their adaptation to bad treatment and poor pastures, or hilly pastures, will forbid them ever becoming what is required of them, by the careless or common shepherd.

SALT AND CHARCOAL FOR SHEEP.—The use of charcoal as well as salt has been highly recommended for cattle, as tending to keep them in good condition and help their general improvement. Salt acts healthily on the blood. Charcoal strengthens and heals the mucus membrane throughout the alimentary canal, and increases the power of the digestive organs, healing any unhealthy condition existing there. It prevents worms generating in the stomach, etc; it absorbs the putrescent gas by which worms are generated, and they subsequently die. The free use of charcoal and salt will contribute to protect cattle from epidemics, and will counteract the effects of putrescent or septic water. Many farmers have, doubtless, noticed that cattle and sheep are remarkably healthy when running among the charred stumps and logs recently burned off fields. We have known a flock of sheep, poor in flesh, to improve to that extent, when permitted to run among charred logs for a few weeks, that they would bring double their former value. The good effect is not perhaps so marked with cattle, but is always advantageous to the health and prosperity of the animal.

HE THINKS SHEEP PAY BEST.—In "Some Sheep Talk," in the *National Live Stock Journal*, an experienced stock keeper says:

I have been feeding some three hundred head of cattle, and I am satisfied that even with the most favorable conditions for selling when the time comes, I shall make a great deal more money, dollar for dollar, on the money I invested in sheep than I shall make on the capital invested in cattle. I have about six hundred sheep, running without any particular attention or care, and have sold one thousand four hundred dollars' worth of wool of this year's clip, and have two hundred and fifty lambs besides. I do not think it possible to have done so well on an equal amount of capital invested in cattle. One great advantage sheep have over other stock is, they never die of the contagious diseases which they contract. They get the scab or foot rot, or something else, and if unchecked it gets them in bad condition, and would ultimately, perhaps, kill them. But the very worst contagious disease to which sheep are subject give the owner ample time to treat the affected animals, and the diseases are generally of a character which yield readily to treatment.

A COMPARISON OF SHEEP.—A sheep breeder says: All farmers should know the most profitable breed of sheep, and they will never know except as I have learned—by experience.

The Merino is a small breed and makes a small turn-out of wool but a large quality of grease and dirt, which is very bad for the buyer. If exposed to the weather, as sheep generally are, they are short lived; their lambs are delicate and much trouble to raise.

The Southdown is a much hardier sheep, and better for wool or mutton than the Merino; will shear more wool and not so much grease and dirt; has a heavy carcass and is superior as mutton.

The Cotswold is acknowledged by all knowing stock men to be the heaviest breed now known, sometimes weighing three to four hundred pounds. Their wool is from three to five times as long as the Southdown or Merino, and is called combing or delain, and is more sought after than any other kind. They are very prolific, sometimes giving birth to three or four lambs, and most always two. I have weighed lambs three weeks old which weighed thirty to forty pounds. They stand the Winter as well if not better than any other breed. The Southdown is thought to be superior as a mutton sheep, but I have never been able to discover the difference when brought to the table. The cross of the two makes the Shropshiredown, a very fine sheep for all purposes.—*Southern Farmer.*

DRESSING SHEEP.—If you want good, sweet mutton, kill your sheep without worrying and fatigue, the less exercise the better. Hang him up by the hind legs and clean him at once. Now change ends, flaying him by the head, and skin down to the tail; the job is done in half the time, and done neatly. It is not the wool that gives mutton the sheepy taste and smell, it is the food during exercise and after being killed, hence the necessity of speedy work until cleaned. This much I have written for the young farmers, and expect some will try my plan, but the old farmers are like I am—have a way of their own, and will do it their way or die. Now, I hope some of these hard heads will tell what they know about sheep, too. –*Ex.*

Extensive Use of the "Weed."

The Americans are a nation of tobacco chewers and smokers, though not so much as some others given to the use of snuff. The statistics of traffic in the "weed" are interesting. They show that during the last fiscal year we exported 318,097,804 pounds, valued at $130,399,181, and imported 10,000,000 pounds of leaf and stem, valued at $5,332,-548 41, and 845,744 pound of cigars, or, in round numbers 76,888,000 cigars, worth $3,-038,628. In the same time, from foreign and domestic material, we manufactured 1,780,-961,000 cigars. The average daily consumption is placed at 5,168,000, and the revenue realized by Government was $39,392,936.

PETERSHAM has produced an auctioneer who tells the truth. He recently told a bidder, "You've got a good bargain on that sleigh you bid off for $2 50. It is just as good for the hens to roost on as one that costs $60.

Apiary.

The Inmates of the Hives.

IN order for a colony of bees to maintain an existeuce (other conditions being favorable), it is necessary for the hive to contain three kinds of bees: 1. The workers, which are undeveloped females, are those bees that perform all the labor of the hive. They elaborate the wax, build the comb, provide for and nurse the young, gather the honey, collect the pollen, and defend and protect the hive. The life of a worker bee, during the busy season, is very short—not over 80 days—60 days may be an average. In seasons of inactivity—as when torpid from cold—they live much longer. 2. The queen bee is the mother of the colony. She is sometimes called "the king" by the ignorant. There is only one to each hive. The term "queen" leads many persons to suppose that she rules the hive like a sovereign with a royal scepter. Such is not the case. It is true she has a queenly look, but her office is only to lay eggs that are to hatch and develop into young bees. After she deposits the egg, she cares no more for it, but leaves it entirely to be provided for by the workers. It is very important for the bee keeper to be familiar with the appearance of the mother bee, so that she can be readily distinguished and found when necessary. The abdomen of the queen is much longer than that of a worker, and is also free from hairs. The wings look shorter, while the legs are longer and have no baskets for carrying pollen. The black queen resembles a black wasp more than a worker bee. As she runs rapidly when scared, and seeks a place to hide, the novice often has great difficulty in finding her. When you wish to look for her, disturb the bees as little as possible, and commence to look carefully on the second or third frame from the outside. Look in the corners and around the sides of the frame. Examine closely each frame. If she is not to be found on the frames of comb, and has not been overlooked, then she is on the sides or bottom of the hive. Sometimes it may be necessary to remove all the frames, and shake the bees on a sheet in front of the entrance, and then look out for the queen as she goes in. After the eyes once get familiar with her appearance, very little trouble will ever be experienced in finding her. Italian queens are very readily distinguished by their bright color and quiet habits. On removing from the hive the card of comb containing the Italian queen, she seldom ever runs like the black one, but often proceeds with her operation of laying as though she were in the hive. Queens usually live about three years; and are said never to leave the hive except to meet the drone or to lead out a swarm. When once fertilized, the operation is for life. Queens are often superseded. As soon as the vigor of a queen becomes impaired, the workers, in seeming anticipation of her barrenness or death, proceed to make preparations to rear another mother for the colony. After selecting the egg or young larva, they proceed to enlarge the cell around it, and to deposit a great mass of a whitish gelatinous substance around the young grub, called royal jelly, which is the food that nourishes, develops and transforms the larva that would otherwise be a common worker into a princess. How this royal jelly accomplishes this wonderful transformation is a great puzzle with apiarians. Many untenable theories have been advanced to account for it, but no doubt the bees will keep the true secret to themselves for some time to come. In about six or seven days from the time the cell is started the bees seal it over. It now has some little resemblance to a ground pea. On an average, the young queen will hatch in about twelve days from the start of the cell. In from five to ten days she will go out to meet the drone, and in a few days more she will be laying. This field of apistical science affords great room for thought and observation.

3. The drones are the male bees. They are large, lusty looking fellows, and make a loud, coarse sound when on the wing. Their mission is to fertilize the young queens. When this is accomplished, the workers have no further use for them; and as they are non-producers from necessity, not having the requisite organs, and having no sting or means of defense, they are unceremoniously ejected from the hive or killed, when the honey or pasturage begins to fail. They are retained much longer in strong colonies than in weak ones. When one colony keeps its drones long after the rest have destroyed theirs, it argues, in all probability, that it has no queen, and needs attention.

The bees that Sampson found in the lion's carcass no doubt built their comb to the skeleton ribs in the same geological forms that bees of the present day build theirs. This may be instinct, the same that characterizes many of their other operations; but I have never yet found the economy of the hive to be governed by invariable law. Many of their actions and operations seem to be actuated by a higher instinct, bordering on the principle of cause and effect. Who of us is always capable of drawing the exact line of demarkation between instinct and reason?—*J. P. H. Brown, in Our Home Journal.*

SHADE FOR BEES.—My observation and reasoning have led me to the conclusion that shade is an advantage, and a decided one, to bees. I do not mean a dense shade, but one partially relieved by sunshine, such as bees left to themselves would and do naturally select—in the tops or upper part of trees, in a forest, seldom if ever the lower, humid part of the wood. Why is this? Evidently because bees require a temperate condition of the atmosphere, neither too cold nor too warm, too damp or too dry, too light or too dark. These three conditions are of importance, and it should be the business of the bee keeper to aim at securing them. I presume no one will pretend that they are a disadvantage; that an excessively hot or an extremely cold season is a favorable one; that bees will do well in a season of severe drouth or great humidity, or with little sunshine to enliven them. The point is not alone the abundance of honey to be collected, but the condition and inclination of the bees to gather it. Bees prefer to be undisturbed; require harmony in the hive, and a favorable condition of the atmosphere. There are many other things that have an influence on bees, so that we see that it is not alone good pasturage that is required. However much honey there is to be gathered, on a wet day little is done. The same is the case with an extreme of cold, and to a certain extent with excessive heat; but not so much with the latter, as bees on the wing or in collecting honey, feel less the solar influence. This brings me back to my point, the locality, the habitation of the bees, which is different from its range. The one has air, freedom; the other combines heat, if the hive is placed in the sun, and especially on a southern inclination with the wind warded off. Such a situation I have found generally to be unfavorable. I say generally, as there are cool and otherwise favorable seasons that are exceptions, in which colonies so situated have done well.

But how can the favorable atmospheric conditions be secured? Nothing is easier. An orchard or a grove will do it. It needs only part shade, part sunshine. This tempers the rays of the sun, and secures the necessary moisture in a drouth, and also leaves a chance for the escape of an excess of humidity. There is a protection, and the encouragement which bees seem to derive from the presence of trees—perhaps from their long habit of association with them. Here there is no melting heat concentrated on the hive. It is comparitively cool inside and pleasant without. The best success I have ever known with bees has been in orchards and shaded doorways, unless I except a few cases in the woods, where wild swarms turned out the most honey. Now there are some seasons in which the exposed hives will do as well as those protected by trees, and even better sometimes—when there is a lack of sun, for instance. But take the seasons on an average, and the difference is decidedly in favor of protection. I am persuaded that an elevated range is, on the whole, better than a low place or valley. —*Country Gentleman.*

BEES, WASPS AND GRAPES.—Some persons imagine that the bees injure fruits, and especially grapes. They are greatly in error. It is useless to insist on the part taken by bees and hornets in the prejudice done to our vineyards. First let us consult the books. I do not find a single book on agriculture, horticulture, fruit or grape culture, that does not cite the wasp among noxious insects that should be fought incessantly and mercilessly; while not a single book mentions as such the industrious honey bee, whose vindicator I now am.

The wasp pierces the fruits; to the grapes it leaves nothing but the skin and the seeds. The bee only profits by those spoils; for she usually goes from blossom to blossom, gathering honey in gardens and fields. If at times she is seen in orchards and vineyards, where she only goes after the wasps, it is only to gather the remains of the feast.

Curious experiments have been tried, it appears: Some sound fruits were placed simultaneously within the reach of both wasps and bees, the former have soon achieved the their work of destruction, while the latter starved to death.

Therefore bees do not eat grapes. So, it is with profound conviction that I say to those who wish, if not to prohibit, at least to render impossible the establishment of hives in the neighborhood of large cities, under the fallacious pretext that they destroy grapes. Respect the bee, since she respect our fruits; let her live in peace near us, she never will be ungrateful. Is she not the mysterious instrument that helps and facilitates the phenomenon of the fertilization of flowers, and perhaps produces those innumerable and beautiful varieties by carrying pollen from the calycle of one into that of another? Is she not the living image of work, and gives us the perfumed honey and the wax that we use so diversely?

Respect the hives, leave them where the industrious genius of man placed them, for they are a source of wealth for the roof that shelters them, and for the country that nourishes them.—*Bucher du Sud Ouest.*

ALWAYS feed your bees for two or three days after they have swarmed, be the weather fair or foul. They will repay your attention and your liberality with usury, before the season is over.

Human Nature in Checkers.

An aged couple were very fond of checkers, and played quite frequently. When he beat she lost her temper, and declared she wouldn't play again. It vexes him to have her act so, but he controls the irritation, and talks to her about it. He tells her how wrong it is for people at their age in life to be disturbed by such trifles, add shows her so clearly the folly of such a course, that she becomes ashamed of her weakness and returns to the game, and plays it so well that she beats him. Then he throws the checkers in one direction and kicks the board in another, and says he will never play with anybody who cheats so all-firedly, and stalks moodily to bed, and leaves her to pick up the things.

THE rate on fruit between Santa Clara and San Francisco the coming season, by rail, will be as follows: On berries, per chest, 25 cents; half chest, 12½ cents. Other kinds of fruit, shipped in boxes or otherwise, 15 cents per hundred weight.

The Dairy.

Treatment of Heifers.

THE longer the young cow with her first and second calf, can be made to hold out, the more surely will this habit be fixed upon her. Stop milking her four months before the next calf, and it will be difficult to make her hold out to within four or six weeks of the time of calving afterwards. Induce her, if possible, by moist and succulent food, and by careful milking, to hold out even up to the time of calving, if you desire to milk her so long, and this habit will be likely to be fixed upon her for life. But do not expect to obtain the full yield of a cow the first year after calving. Some of the very best cows are slow to develop their best qualities; and no cow reaches her prime till the age of five or six years.

And here we have a suggestion to make, of too great importance to be overlooked or disregarded, with reference to the time the young heifer should be allowed to come in. Suppose a heifer came in with her first calf in Winter, or cold weather, which prevents the distension of the tissues of the skin, and on dry food, such as she would generally have at that season, and which produces at best but little milk. The organs of secretion will have but a slight development, compared with what they otherwise would, and will adapt themselves to a small yield of milk. This will be likely to become a fixed habit which it will be exceedingly difficult to break up. Hence we somtimes find external signs and actual results contradictory.

The extreme importance of care and attention to these points cannot be over estimated. There is a constant tendency to dry up in milch cows; and it must be guarded against with special care, till the habit of yielding a large quantity, and yielding it long, becomes fixed in the young animal, when, with proper care, it may easily be kept up.

If gentle and mild treatment is observed and persevered in, the operation of milking appears to be one of pleasure to the animal, as it undoubtedly is; but if an opposite course is pursued—if, at every restless movement, caused, perhaps, by pressing a sore teat, the animal is harshly spoken to—she will be apt to learn to kick as a habit, and it will be difficult to overcome it ever afterwards.

With the exception of the policy of milking cows to the time of calving, which we believe to be bad for both calf and cow, the above from the *Massachusetts Ploughman* we consider sound advice on the subject.

MORE ABOUT CHEESE.—It is important, says the *Mass. Ploughman*, that rennet enough should be prepared at once for the whole season, in order to secure as great a uniformity in strength as possible. The object should be to produce a prompt, complete, and firm or compact coagulation of all the cheesy matter. To obtain a good quality of rennet that will effect this, the animal should be in perfect health, and the stomach should be emptied of its contents, salted and dried without any scraping or rinsing, and kept in a dry place for one year, when it is fit for use, but if it is allowed to accumulate dampness, it will lose its strength. In Cheshire, so celebrated for its superior cheese, the contents of the stomach are frequently salted by themselves, and after being a short time exposed to the air are fit for use; while the well known and highly esteemed Limburg cheese is mostly made with rennet prepared as in Ayrshire, the curd being left in the stomach, and both dried together. The general opinion is that rennet, as usually prepared, is not fit to use till nearly a year old.

Perhaps the plan of making a liquid rennet from new and fresh stomachs, and keeping it in bottles corked tight till wanted for use, would tend still further to secure this end.

TO PURIFY DAIRY UTENSILS.—Stand on end in a convenient place for use, an open-headed vessel of suitable dimensions for the size of the dairy, say from half a barrel to a hogshead. In this slack some good quick lime, enough to make thin whitewash when filled full of water, and cover to keep out dust and dirt. The lime will settle, leaving a saturated solution of lime over it, as clear as spring water. After using the milk pans, etc., wash them as other utensils are washed and rinsed; then dip them in the adjoining cask of clear water, giving them a quick turn, so that every part becomes immersed therein; set them to drain and dry, and the purification is complete without any scalding process, from the new pan to the old worn out one.

The lime in the clear water instantly neutralizes the acidity of the milk yet remaining in the crack or seams, etc., of the milk vessels, to destroy which the process of scalding has been performed.

In the case of a small dairy, or one cow, the clear water may, if preferred, be dipped out for the time being and poured gently back again, the lime purifying the water and keeping it good all Summer.

Boys and Girls.

Mud Pies.

FOUR little sun-bonnets, ruffled and neat,
Covering tangles of sunshiny hair;
Chubby pink fingers, that busily work;
What have you found that is beautiful there?
Toiling like elves in their shadowy-wrapt caves,
Lying so far down from sound and from sight
That no remembrance of daylight can break
O'er the dark calm of their morningless night.

Find you the diamond, red garnets and pearls,
Emerald, topazes, rubies and gold?
Find you the key at whose magical touch,
Gem laden chambers of earth will unfold?
What do your merry eyes see that is fair?
Is it the sky that drifts soft, amber light?
Is it the blossom of lily and rose?
Is it the lark that sings on her flight?

Is it the brown thrush whose musical strains
From the green hedges and thick-t-nooks thrill?
Is it the field, blossom-dotted and fresh?
Sparkling river or diadem hill?
No, your wise heads bend thoughtfully down,
O'er the soiled hand that so busily flies,
Holds not a thought of earth's beauty and joy—
Making and caring for only mud pies.

Queer little pies, sprinkled over with stones,
Crimson, and yellow, and speckled with blue;
Trace-worked with broken twigs, powdered with sand;
Soiled leaves and blossoms, yet wet with the dew;
Crimped, pinched and scalloped, indented with holes
Where little fingers pressed heavily down;
Bits of green mosses and delicate ferns,
Over these homely pies daintily strewn.

Ah! little children, not you alone
Gathering the grime, while the good and the true
Pull souls come up into heavenly light.
Tells of grand deeds that they grandly may do.
Others than you fill the earth day by day,
Working unconscious of glorified skies;
Blind to the beautiful, blind to the true,
That all-transfiguring over them lies.

What the Baby Saw In the Class.

Mamma had gone and Aunty held him before the mirror to quiet his cries. In an instant his face was radiant with smiles while the tears rapidly rolled out of sight. His hair, like rings of gold, clustered about his head glistening in the sunshine, and he was a picture to behold.

For full ten seconds gazed baby on his own reflected image with wide open eyes. Then, chancing to move his hand, he noticed the same movement in the baby in the glass. He glanced first at his own chubby fist, then at the reflected one, as if comparing them. Unable to comprehend the meaning of it all, he came back to himself and burst out crying anew, dealing Aunty a heavy blow with the little doubled-up fist, one eye all the while upon the other baby, who quite startled him by doing the very same thing. In a moment the cry was checked, infantile indignation was awakened and a blow was aimed at the head of baby in the mirror.

Here is a lesson for babies of an older growth, thought I. Seeing yourself as others see you is both profitable and instructive, since it teaches a larger charity for others.

NELL VAN.

BAD BOYS MAKE BAD MEN.—An aged sea captain, who had spent a long life upon the ocean, said to a lady, "On ship board I can tell in a very short time what any sailor was in his boyhood." It was because "the boy was father to the man." He added, "I find invariably that a bad boy makes a bad man." When he saw a reckless, profane, vicious "son of the deep," he at once concluded that he was little better when a lad. Now this is just what might be expected. It is just what is seen in other things. Poor wool or cotton makes poor cloth. Poor cloth makes a poor coat. Poor farms produce poor crops. Poor timber makes a poor house. And so wicked children make wicked men and women.

It is said that the Emperor Nero of Rome, when a little boy, delighted to torture and kill flies, and would pursue the little creatures hour after hour to pierce them and see them flutter and die in agony. As he grew older he exhibited the same cruel disposition towards men. When made emperor he advanced in cruelty at a fearful rate; killed his own wife and ordered his mother to be assassinated. Nor was this all. He finally ordered the city to be set on fire, just to see how it would look. And when it was burning, he seated himself on a high tower and played upon his lyre. Was this strange? Is not a cruel boy likely to become a cruel man? Killing men in manhood is only a further development of killing flies in childhood.

TO BOYS AND YOUNG MEN.—You are the architects of your own fortunes. Rely upon your own strength of body and soul. Take for your motto self-reliance, honesty and industry, for your star faith, perseverance and pluck, and inscribe in your banner, "Be just and fear not." Don't take too much advice; keep at the helm, and steer your ship. Strike out. Think well of yourself. Fire above the mark you intend to hit. Assume your position. Don't practice excessive humility; you can't get above your level—water don't run up hill—put potatoes in a cart over a rough road and the small potatoes will go to the bottom. Energy, invincible determination, with a right motive, are the levers that rule the world. The great art of commanding is to take a fair share of the work. Civility costs nothing and buys everything. Don't drink; don't smoke; don't swear; don't gamble; don't steal; don't deceive; don't tattle. Be polite; be generous; be kind. Study hard; play hard. Be in earnest. Be self-reliant. Read good books. Love your fellowmen as yourself; love your God; love your country, and obey the laws; love truth; love virtue. Always do what your conscience tells you to be a duty, and leave the consequence with God.

ABOUT SO.—The habit of taking strong drink is like a river. An occasional glass is of little account, men say, and they take it. Then they drink oftener. The river grows broader and swifter, but they do not think of this. They drink yet oftener, and after awhile the little stream of habit has grown to be a wide, roaring torrent, and a little farther on is death.

DEWDROPS at night are diamonds at morn; so the tears we weep here may be pearls in heaven.

THE *Scientific American* thinks that people with bad colds ought not to kiss babies, as diptheria might easily be imparted in that act.

Woman's Progress.

Business Suitable for Women.

TO THE EDS. AGRICULTURIST: In the *Popular Science Monthly* there appears an article from the able pen of Dr. Van De Warker on the subject of "Women in the Professions and Skilled Labor." The logical conclusions deduced from the sexual disability of women to compete with men in business pursuits denote great study as well as a thorough understanding of the subject. But we would ask how many of our tender, struggling sex are not compelled, day after day, to lay aside sexual incompatibility in order to put bread into the mouths of children and clothes upon their backs? Is the wash-tub better fitted to woman's delicate organization than mental pursuits? Can she more easily attend to a house full of boarders, often doing the entire cooking for them, than to act in the capacity of physician, or attend to various kinds of skilled labor requiring less outlay of vital force? Would not our women of to-day be far healthier if, instead of uncongenial drudgery, her life was filled with satisfying work suited to her taste and temperament?

Training schools for preparing young women for self support in the way which suits them best will place before us a different condition of things. Physicians of both sexes are needful to attend to the diseases of each. Then our young women would not neglect their health till almost past remedy before consulting a physician.

Query: Are the natural infirmities of women a greater drawback to business occupations than the rapidly increasing infirmities of men for what is found in the saloon and gambling hall?

NELL VAN.

WHAT WOMEN HAVE GAINED.—For the time, still fresh in the minds of middle-aged persons, when there were no remunerative occupations open to women, when there was no high school for girls, no college that would admit women; when women lecturers, lawyers, doctors, editors, and ministers, were unknown, up to this time, when all these things and many others are free to women, the gain seems marvelous. But the gain in legal rights is even greater.

It is not thirty years since a married woman could not own money, even when she had earned it by hard work. She could not make a will of any property she possessed. She gave birth to a child, and the law said it was not hers. She could not make a contract. She could not make a valid deed of the land she owned. She could not be the guardian of children—not even of her own. She had only the pauper right, viz., the right to be maintained. All the hard work of her hands, and all the income from her brain belonged to the husband, who owned, and was supposed to support her. To-day a wife can legally earn and own; can buy and sell and sell and will; can make a valid deed; can be guardian of children, and, at the marriage ceremony is not necessarily required to promise to obey.

In Wyoming and Utah Territories women are voters. In Michigan more than forty thousand men at the polls cast their vote for woman suffrage. In many States women are legally elected and do serve on the school Board.

Iowa has taken the first legal step to secure suffrage to women. Three judges of the Supreme Court in Maine express the opinion that women may legally serve as justices of the peace in that State. In Congress and in every Northern state legislature, the equal political rights of women are discussed.

Thus, from the smallest of all beginnings, through three decades, has the good cause of woman's rights grown into place and power. Now it only waits to be crowned with woman suffrage.

To this end societies exist in every Northern State, supplemented by county and town societies, by political clubs, pledged to secure the election of legislatures of such men as will vote for the enfranchisement of women.

An army of women are leagued together in solemn covenant to secure their rights to a voice in making the laws which they are required to obey. The time cannot be far away when this will be accomplished.

As an incentive to activity, it should never for a moment be forgotten that in the different States the law makes women the political equals of paupers, idiots, lunatics, felons; of men guilty of bribery, forgery, illegal voting, duelling, treason, and any other crime or weakness which unfits men to be trusted with the rights of citizenship.

This picture of gain and loss closes the year 1874. May the next one end with brighter colors.—*Lucy Stone, in the Woman's Journal.*

SENSIBLE FASHIONS FOR WOMEN.—The dress committee of the New England Women's Club seek to make the changes in women's dress as unobtrusive as possible. They begin with the under garments. Those of the old style which they utterly condemn are the chemise and the corset. These they entirely abandon. The principles which they carry out are these —perfectly free action for the vital organs, thus abolishing all tight-fitting waists and all tight bands around the waist; an equalizing of the heat of garments over the entire body, and increasing it upon legs and arms; a reduction of the weight of the clothing, by making skirts as few and light as possible; the supporting of all clothing from the shoulders, by attaching skirts to waists or suspenders.

The garments already devised, which embody these principles, are the chemiloon and the gabrille underskirt. The first is made of flannel or cotton, a long-sleeved waist and drawers in one, covering the person from wrist to ankles. Outer drawers may be buttoned to these. The stockings are drawn over the long drawers fitting at the ankle, and fastened with safety pins, or with buttons fastened on the drawers. No garters are allowed, because these hinder the circulation of the blood. The gabrille under skirt is made of white cotton usually, gored from shoulder to hem, after the plain gabrille pattern, rather loosely fitting, and sufficiently short and scant. The outer skirts button upon it, so arranged that one band does not lie over another. If a hoop is worn (and this is recommended, as it keeps the folds of the skirt from clogging the limbs in walking, and holds the tops of the other skirts so as to prevent undue heating of the pelvis and spine), there should be a stout button hole in the middle of the back of the hoop band, to fasten upon a strong button on the back seam of the under skirt waist. On each side of this button hole place the buttons for holding common suspenders, placing the front buttons just over the firm side terminations of the upper hoops. This brings the suspenders back under the arms, so that they do not interfere with the bust. The balmoral may rest upon this hoop, with a binding made in semicircular shape, so as to lie upon the skeleton below its binding.

For outer dress, the plain gabrielle pattern is recommended, not too full in the skirt, and lightly trimmed if trimmed at all. This for the house dress; and an added polonaise or overskirt and sack for the street.—*American Agriculturist.*

A NOVEL EXPERIMENT IN HOUSE-KEEPING. The troubles and vexations which housekeepers seem inexorably doomed to suffer in consequence of the great difficulty—the apparent impossibility, as a general rule—of obtaining good domestic servants, have given rise to a variety of curious suggestions. Among these we remember none more singular than that which it is said an English lady is now subjecting to the test of actual experiment. It is not difficult to imagine by what process of reflection a woman of strong philanthropic impulses and hopeful nature, slightly dashed with the Quixotism characteristic of female reformers, might be led to conceive so extraordinary an idea. Probably the lady in question felt acutely the annoyance inseparable from the existing system of domestic service; on the other hand, she saw all over the land a class of young women needing employment, but unable to obtain any which, according to prevailing social ideas, they could accept without disgrace; a class sufficiently refined and well-educated to qualify them for at least the humbler grade of positions as teachers or governesses, and who for that very reason could not, without a painful feeling of degradation, become household servants. She saw that this class, already too numerous to find occupation of the kind deemed suitable for them, was rapidly increasing with the more general diffusion of education; and reflected that the time must come when a proportion of those belonging to it would have to choose between menial labor and pauperism, or accept a lot worse than either. She knew that it was not the actual hardship of the work involved in domestic service, but the popular idea that such occupation is only suitable for the ignorant, the illiterate and those coarsely reared, that made young women possessing a measure of culture and refinement shrink from it as from something almost equivalent to disgrace. Having thus got at the real difficulty in the case, the solution would not be far to seek for such a person as we conceive the originator of this new sociological experiment to be. Accordingly, we are told that she proceeded to put it to a practical test by dismissing her servants and engaging in their places five young women of the class that had aroused her benevolent solicitude. These were to act respectively as lady's maid, dairy maid, upper house maid, kitchen maid and cook. The terms of the agreement were that the new "help" or "domestic companions" (for of course no such word as servant figured in the contract) were to receive the same wages paid to the former incumbents of their respective positions; and further, that when off duty they should be treated in all respects as equals. When there is company they are to mingle with the guests and assist in entertaining them; when the lady of the house rides out, they are to join her; in short, all the existing barriers between the positions of mistress and maid are to be broken down. Such is the outline of the new social dispensation which is said to be now actually on trial.

AN ANTI-CORSET SOCIETY.—If there ever was a country distinguished for its love of moral and social revolutions, it is this country of ours. Some of the attempted revolutions are absurd enough, but others are not only sound but practical. Among these is the effort, the organization started in Brooklyn by a number of ladies, "to put down corsets, high-heeled boots, false hair, and such like auxiliaries to feminine attraction." This is an undertaking that at once commends itself to every man and woman of sense in the land. It will be supported heartily by the medical profession, and, we trust, both by the pulpit and the press. It is time that sensible people should put their foot upon senseless clothing.

CARBOLIC ACID A PRESERVATIVE FOR HIDES. In South America and Australia, it is stated that the immersion of hides for twenty-four hours in a two per cent. solution of carbolic acid, and subsequently drying them, has been successful substituted for the more tedious and expensive process of salting.

AFTER taking up a carpet, sprinkle the floor with a very dilute carbolic acid before sweeping.

Hygienic.

Milk as a Diet.

MILK being furnished by nature as the only food for the young mammal, during a certain period of its existence, contains all the elements necessary for the nutrition and growth of the body. Out of the caseine of milk are formed the albumen and fibrine of the blood, and the proteinaceous and gelatinous tissues. The butter serves for the formation of the fat, and contributes, with the sugar, to support the animal heat by yielding carbon and hydrogen to be burnt in the lungs. The earthy salts are necessary for the development of the bony system; the iron is required for the blood corpuscles and the hair; while the alkaline chloride furnishes the hydrochloric acid of the gastric juice.

It is somewhat strange that a prejudice should exist among the masses in relation to milk diet. Milk is in general readily digested by children and is universally conceded to be the very best diet for them. It is too true that when milk contains too much oily matter it often induces various disorders of the digestive organs. With such the milk which gives very little cream, or skimmed milk, usually agrees. Milk is a very useful and valuable article of food, both for the child and the adult, and for healthy individuals, as well as for invalids and convalescents. The principal drawback to its employment in many cases is the difficult digestibility of its fatty constituent, butter.

There is no more innocent food among the whole list of aliments than pure milk. It contains bone, muscle, fat, and brain producing substances, in an eminent degree, and just in the proper shade for assimilation. It is true that milk in inordinate quantities, or if the diet be suddenly changed to milk, the person will sometimes become constipated, perhaps, or else the reverse. But this is not due so much to the milk as to the change in the diet, for other changes in ordinary food would produce the same result. It is true there are some individuals who, from some peculiar condition of the digestive organs, can not take milk; and this exception will apply to almost every article of food; but these isolated facts do not invalidate the general rule.

One of the principal objections to a milk diet in the cities is the fear of adulterated or impure milk. This difficulty may be easily obviated by knowing of whom you get the milk. It is true that in cities a serious difficulty in this line exists, as there may be a large quantity of milk sold which is the product of breweries and distilleries; nevertheless, this is but a small proportion of the whole quantity used; the great bulk is brought direct from country dairies, and undoubtedly is furnished in a pure condition; or if anything be added it will only be water. The customer may test the article sold by the milkman and also that of the dairyman, and in the end it will result in honest dealing.

Milk is becoming one of the great reliances of the physician in various cases of disease, especially in typhoid fever, when the patient has become so low as to be incapable of taking solid food. It is used in the form of whey, and is an excellent diluent and nutritive. It may be used in febrile and inflammatory complaints. It is sometimes prepared by means of rennet, and is denominated "rennet whey." White wine whey, taken warm and combined with a sudorific regimen, acts powerfully on the skin and is a valuable domestic remedy in slight colds and febrile disorders. Cream of tartar whey is prepared by adding a quarter of an ounce of cream of tartar to a pint of milk. It may be diluted with water and used in febrile and dropsical compaints. Milk and lime water forms a very useful remedy in some irritable conditions of the stomach and uterine organs.

Washing the Inside of the Body.—There is no cavity in the body which water is not fitted for if you get it in properly. Why, one of the best things you can do is to wash your blood, and the great folly we commit in going through our lives from childhood to the grave is that we do not wash our blood as we ought. Infusions of coffee, tea, chocolate, or cocoa, or cider, or beer, do not wash the blood, because with the fluid so taken in, something is carried in also which befouls and defiles the blood. Just let a man say to himself, "It is Saturday night; I have worked hard all the week, and Sunday shall be a day of rest to me. I am now going to give my whole system, between this and Monday morning, a good thorough washing." So he begins to drink, and drink, and drinks but little at a time, yet between Saturday night and next Monday morning a healthy man can drink, without producing disturbance, a gallon of water. Now let this come into and go through his circulation—through his lungs, and skin, and kidneys, and bowels, and waste materials are carried out—and when Monday morning comes, if he jumps out of bed and gives his external skin a good washing, the water that he washes in will be foul. Or if he prefers to test that question even more thoroughly, all he has to do is to take a clean sheet, and wetting it in good, soft, pure water, be wrapped up in it for forty-eight or sixty minutes, and then have the sheet washed in a tub of water, and it will color that water so it will look dirty. The man has been washed inside —his blood has been washed. When you have washed his blood, tissues, bones, nerve, muscle, sinew, membrane and brain, and everything in him, he can defy all pestilence for that week. The washing of a person's outside is twice as necessary as the washing of a person's clothes, and yet there are those who are very particular to have their clothes washed with great care, who are not at all particular to wash themselves.

What Alcohol Will Do.—It may seem strange, but is nevertheless true, that alcohol, regularly applied to a thrifty farmer's stomach, will remove the boards from the fence, let cattle into his crops, kill his fruit trees, mortgage his farm, and sow his fields with wild oats and thistles. It will take the paint off his building, break the glass out of his windows and fill them with rags. It will take the gloss from his clothes and polish from his manners, subdue his reason, arouse his passions, bring sorrow and disgrace upon his family, and topple him into a drunkard's grave. It will do this to the artisan and the capitalist, the matron and the maiden, as well as to the farmer; for in its deadly enmity to the human race, alcohol is no respecter of persons.—*Temperence Worker.*

Sound Common Sense.—If you are well, let yourself alone. One of the great errors of the age is, we ngdicate the body too much, the mind too little. More persons are destroyed by eating too much than by drinking too much. Gluttony kills more than drunkenness in civilized society. The best gymnasium is a wood yard, a clearing, or a corn field. A hearty laugh is known, the world over, to be a health promoter; it elevates the spirits, enlivens the circulation, and is marvelously contagious in a good sense. Bodily activity and bodily health are inseparable. If the bowels are bound, lie down in bed, remain there, and eat nothing until you are well. The three best medicines in the world are warmth, abstinence and repose.—*Dr. Hall's Magazine.*

Wet and Dry Bathing.—If any one in these days will exercise in the open air, so that each day he will perspire moderately, and if he will wear thin under-garments, or none at all, and sleep in a cold room, the functions of the skin will suffer little or no impediment, if water is withheld for months. Indeed, bathing is not the only way in which its healthful action can be maintained by those living under the conditions at present existing. Dry friction over the whole surface of the body, once a day, or once in two days, is often of more service than the application of water.

The reply of the centenarian to the inquiry to what habit of life he attributed his good health and extreme longevity, that he believed it due to "rubbing himself all over with a cob every night," is significant of an important truth. If invalids and persons of low vitality would use dry friction and Dr. Franklin's "air bath" every day for a considerable time, we are confident they would often be greatly benefited. Cleanliness is next to godliness, no doubt, and a proper and judicious use of water is to be commended; but human beings are not amphibious. Nature indicates that the functions of the skin should be kept in order mainly by muscular exercise, by exciting natural perspiration by labor; and, delicious as is the bath, and healthful, under proper regulation, it is no substitute for that exercise of the body without which all the functions become abnormal.—*Dr. Nichol.*

Grasshoppers.

In reply to an inquiry by a correspondent of the New York *Sun* as to whether the grasshoppers so destructive to crops in the West are the same as those which infested Egypt, and also whether the seventeen-year is a native of this country or imported, its able agricultural editor, Mr. Fuller, says:

The grasshoppers of the Western States are of an entirely distinct species from those inhabiting Egypt or other portions of the Old World, but belong to the same family as the locust of ancient as well as modern times. Grasshopper is a mere local English name for the hundred or more distinct species which inhabit our country. The one to which you refer as doing so much damage in the Western States is known to entomologists as *Caloptenus spretus*. The seventeen-year locust is not a locust, that is, it does not belong to the grasshopper or *Locustidæ*, but to the *Cicadas*, a large species of flies, which have no mandibles for biting or masticating food like the true locust; consequently they do not consume vegetable food, and the only injury they do to plants is to puncture the stems and twigs in depositing their eggs. They are also native Americans, at least so far as is known to science or history.

The Preservation of Smoked Meat.—Professor Nessler says that the keeping qualities of smoked meat do not depend upon the amount of smoking, but upon the uniform and proper drying of the meat. It is of considerable advantage also to roll the meat on its removal from the salt, before smoking, in sawdust or bran. By this means the crust formed in smoking will not be so thick; and if moisture condenses upon the meat it remains in the bran, the brown coloring matter of the smoke not penetrating. The best place to keep the meat is in a smoke house in which it remains dry, without drying out entirely as it does when hung in a chimney.

Recently, at the Polytechnic School in Paris, one of the professors inquired into the habits of the one hundred and sixty students there, and then made a comparison between their devotions to study and to smoke. He found that in each grade of the school the students who did not smoke out-ranked those who did smoke, and that the scholarship of the smokers steadily deteriorated as the smoking continued. On account of several trustworthy reports of such a nature, the Minister of Public Instruction in France issued a circular to the directors of colleges and schools forbidding the use of tobacco to students, as injurious to physical and intellectual development.

Subscribe for the Agriculturist.

Educational.

Before School.

"QUARTER to nine! Boys and girls, do you hear?"
"One more buckwheat, then—be quick, mother, dear.
Where's my luncheon box?" "Under the shelf—
Just in the place you left it yourself!"
"I can't say my table!" "O, find me my cap!"
"One kiss for mamma and sweet Sie in her lap."
"Be good, dear!" "I'll try." "9 times 9's 81."
"Take your mittens!" "All right." "Hurry up, Bill; let's run."
With a slam of the door, they are off, girls and boys,
And the mother draws breath in the lull of their noise.

After School.

"Don't wake the baby! Come gently, my dear!"
"O mother! I've torn my new dress—just look here!
I'm sorry; I was only climbing the wall."
"O mother, my map was the nicest of all!"
"And Nelly, in spelling, went up to the head!"
"O say! can I go out on the hill with my sled?"
"I've got such a toothache!" "The teacher's unfair!"
"Is dinner 'most ready? I'm just like a bear!"

Be patient, worn mother, they're growing up fast;
These nursery whirlwinds, not long do they last;
A still, lonely house would be far worse than the noise;
Rejoice and be glad in your brave girls and boys!
—[R. I. Schoolmaster.

Do Farmers Read Enough?

Is it not true that many farmers read very little, hardly enough of the news of the day to keep posted in regard to the current events of our country, to say nothing of the foreign news? Further, do they read that which pertains to their business, trying to improve the mind upon the great study of agriculture? This class do not seem to realize how much education and improvement of the mind have to do with farming. They count strong hands and muscle as the only requisites for successful farming. They depend altogether too much upon the weather and circumstances, and too little on skillful, intelligent management for success in their business. We know there are some who will say that this is not true—that many ignorant, unread men are quite as successful in tilling the soil as those who read. But we think we can point out some of the reasons to show that the same men could do better if more brain labor were applied in connection with the labor of the muscles. In the first place, mind is regarded as the measure of the man in every other profession; and all other business succeeds in proportion to the active knowledge and intelligence the man has who manages it. Why should it not be so with the farmer? Much as we value bone and muscle, brain are the most important. The body is but the tool, the mind is the hand that works it. It is to education and progress in the arts and sciences that all our enlightened and civilized countries owe their greatness. The barbarous have strength of body, and in many countries superior soil and climate to our own. Why has this country become great and prosperous except for its superior culture of the mind? Intelligence is strength, and whatever power or influence a people possess must be developed through the intelligence of that people. But, to apply it more practically to the business of farming, we would say that in no industrial pursuit is the improvement of the mind—education is the thing which pertains to the profession—more important. The desired culture and information can be gained mainly through reading. New and valuable ideas gained by reading and study will be as so much capital to him. A reader is generally a man of knowledge and culture, and he acts in proportion to his knowledge. We should read more agricultural books and papers, and if we can by reading ascertain a better way of doing any kind of farm-work, or make any advances whatever in theory or practice that would benefit us, we should be prepared at once to adopt it. If we have a farm of poor soil to be brought up to a certain standard, let us study the science of agriculture and the means best and most economically adapted to improve it as rapidly as possible. If we are the fortunate possessors of a soil rich in all the elements of fertility, it should be our constant aim and study to keep it so, and see that no injudicious system is pursued in its cultivation, and that its natural fertility remains unimpaired, but constantly improved. This applies also to every department of the business, whether it be in the cultivation of crops or the raising of stock. A farmer's library, books and papers, which are in the reach of everybody, will develop and improve the mind, so that farming will be done on correct business principles.—*New England Homestead.*

FOR THE BOYS.—Reflection upon observed facts is one of the best means of obtaining an education. Many men are wise who hardly know how to read. Knowledge is not wisdom; but knowledge to a greater or less extent is necessary to the one who would be wise. Now we gather knowledge—we learn facts by reading, by experience, and by observation. But we cannot be *always* reading; we would not wish to *experience* many things, but we can *always observe*, and that without danger to ourselves. We observe the experience of others, and if we be wise, make use of the facts thus gained to direct our own life.

Let me then say to the young, learn to observe, let nothing escape your eye or ear. For instance you are walking in the city, close by the corner of the street lies a man in the gutter. Notice him, look at his bloated face and bloodshot eyes, look at his rags, notice, observe, see him there, use your eyes. But as we come nearer to hear some remarks made by the men standing around him. Now listen, hear—"He was the best lawyer in the city, but drink has brought him here." So says a man who knows the drunkard. Now let us travel on while I teach you to reflect upon the fact which you have gathered by observation. Drink has brought the best lawyer in the city to the gutter. Upon reflection you will conclude that drink is the foe of mankind—a snare for the foolish, the destroyer of many strong men. So far, so good. Observation well made. Reflection has done her work well. Now comes the test. Are you wise? Let me see. Come with me and have a drink. If you will go in now and drink then you are a fool. You did not know how to apply the result of you observation and reflection to your own life. Oh, you won't go, won't you, then you are wise. Observation and reflection has given you a principle, and you wisely apply that principle to your own life. Let us, while young, learn to observe. Reflect upon the facts thus learned, and then show our wisdom by the application of these principles to our own life. What good will a head full of facts like the above do us, if we do not apply them to our lives? The carpenter may have his chest full of tools, but if he will not use them they will benefit neither himself nor any one else. A few tools well used will benefit more than many never touched. So a few facts well thought over and strictly applied to the life often make a man great, when the walking library is often a sot. Let us then gather facts as we may, by reading, experience, or observation. Reflect upon and deduce principles therefrom, and apply them to our lives, and be not only educated, but wise.

DIVERSITY OF GIFTS.—One of the most difficult questions parents are called on to settle concerns the particular training each individual child requires. No two of a dozen children in the same family agree in disposition, in ability, in taste and inclination. Each has his idiosyncracies and his special gifts which render special treatment necessary. One boy has a passion for farming, his brother delights in music, still another enjoys using tools and solving mathematical problems. What folly it would be to subject these three boys to the same curriculum of study, and expect in this way to make the most of them as men. Not what we put into a boy's head educates them, but what we draw out of it. Education is a process not of cramming, but of development, and wise are those parents who, understanding the abilities of their children, suit the training each receives to his special requirements. It is not easy in a multitude of cases to tell exactly what particular talent a boy or girl possesses. We must wait for time to develop his or her special gift, and while so doing give the best general training in our power, shaping the child's course in the direction in which it seems most probable he will be successful in winning the desirable things of this life, and so winning them as not to lose in the life to come.—*Mrs. Lyman, in N. Y. Tribune.*

TEACHER—"John, you young scapegrace, come here, and I'll pay you back your impudence to me yesterday."
Pupil—"No, thank you, I have conscientious scruples against taking back-pay of that sort."

Live and Dead Weight of Cattle.

It is well known that the amount of flesh obtained from animals sold by live weight is exceedingly variable, even in animals of the same breed, as so much depends on the condition or fatness of the beast. There is also a great variation in the quality of the meat in breeds; as a rule, the finer the breed of the animals the more eminent the prime points, the Short-horns and Herefords being noted for muscle and fat, and the Ayrshires and Jerseys being types of milk producing breeds. Again the Jerseys are eminent for richness of milk, and the Ayrshires for quantity. The English, French and Belgians have instituted numerous experiments to show the weight of the different parts of the animals slaughtered. Two instances, one a bullock, another a sheep, will suffice.

In the case of an ox a live weight of 1,322 pounds yielded, meat, 771.4 pounds; skin, 110.5; grease, 88; blood, 55; feet and hoofs, 22; head, 11; tongue, 6.6; lungs and heart, 15.34; liver and spleen, 80.5; intestines, 66.15; loss and evaporation, 152.72; making the total of 1,322 pounds.

The product of a sheep weighing 110.02 pounds were as follows: Meat, 551; skin, 7.71; grease, 5.51; blood, 5.508; feet and hoofs, 1.204; head, 4.409; tongue, lungs, heart, liver and spleen, 3.408; intestines, 6.612; loss and evaporation, 19.656; making a total of 110.02 pounds.

French statistics show that the same cattle yield as much as 70 per cent. meat, while others give only 50 per cent. The mean weight of meat produced is estimated at 55 per cent. of live weight. In the case of the sheep, the production is from 40 to 45 per cent., the fatter animals always give the greatest net weight.

To show how the same rule will apply to the United States, we may state that in New York native steers are allowed fifty-six pounds to the hundred, live weight. while grades are estimated at forty-six pounds per hundred. As an instance, weighing net 500 to 700 lbs, will bring 8¾ to 12½ cents per lb; those from 700 to 800 lbs will bring from 12½ to 14 cents, and grade steers 875 to 1,200 lbs will bring 12¼ to 15 cents, and weighing 1,400 to 1,500 lbs will bring 14 to 18 cents.

THE propagating houses of the Agricultural Department of the State University, at Berkeley, were ready for use last August, and since that time, says the Oakland *News*, 10,000 plants of 20 species of eucalyptus; 5,000 acacias of 25 species, 200 species of native and foreign coniferæ, also numerous rare ferns peculiar to Australia, South and Central America, and elsewhere, and many species of textile, medicinal and other economic plants have been produced. We may mention 112 varieties of roses, 12 of azaleas, 13 of camelias, and 6 of magnolias, for ornamental purposes.

COMING STOCK SALES.

We gather from advertisement in the *National Live Stock Journal* the following announcements of sales of fine stock to take place at public auction during April and May, 1875.

April 6th—C. C. Parks & Co., Waukeegan, Ill.; 30 head of Clydesdale horses and over 50 Cotswold sheep.

April 7th—C. C. Parks sells the entire Glen Flora herd of Short-horns—126 head.

April 8th—Elliott & Kent will sell the entire Elm Grove herd of Short-horn cattle, at Dexter Park Stock Yards, Chicago; Ill.—65 head,

April 9th—J. H. Lissinger & Co. sells Short-horns at Dexter Park, Chicago, Ill.—45 head.

April 14th—S. W. Jacobs, West Liberty, Iowa; Short-horns of the "Wapsie Herd"—70 head.

April 15th—Milton Briggs, Kellogg Station, Jasper county, Iowa, will sell, on Oak Hill Stock-farm, 140 head of Short-horns and 100 head of Berkshire swine.

April 21st—John Dolese & Co., Summit, Ill.; 54 head Grade Norman horses.

April 27th—J. H. Pickerell, Decatur, Ill.; 23 head of the Harristown herd of Short-horns. Also 22 Southdown ewes, and 12 Berkshire swine.

April 28th—Messrs. Duncan, Smith, Franklin & Nichols, Decatur, Ill., will sell 130 head of Short-horns.

April 29th—J. H. Spears & Son, Bloomington, Ill., 40 head Short-horns.

April 30th—Messrs. Prather & Foster will sell 70 head of Short-horns, at Springfield, Ill. Also, W. Black of Carrollton, Ill., will sell Short-horns at same time and place.

May 3d—W. G. Harding, Nashville, Tenn., 30 head fine bred horses.

May 7th—S. Meredith & Son, at Cambridge City, Ind., will sell a lot of Short-horns.

May 18th—James H. Davis, Danville, Ky., will sell 50 head of Short horn cattle.

There will also be sales of Short-horns at Dexter Park Stock Yards, Chicago. On May 19th, L. W. Thorn, 30 head; 20th, J. P. Sanborn, 75 head; 21st, Avery & Marphy, 75 head; 22d, J. R. Shelly, 110 head.

May 27—Chas. Lowder, Plainfield, Ind., will sell 70 head of Short-horns and 50 Berkshire Pigs.

Our readers will be interested in Dr. Scott's article in this number on "The Cultivation of the Olive in California." Whatever subject he "touches pen to" is ably handled.

BEAUTIFUL SCULPTURE.

At the well-known marble works of Field, Combs & Gregory, San Jose, we lately noticed a piece of monumental work that surpassed anything of the kind we ever saw. It was designed by Norman Porter, Esq., for his wife's grave. The design was unique, and showed originality and genius, while the work exhibited skill of a high order. A heavy shield, bearing an inscription, framed in a border of scroll work, was surmounted by an exquisite wreath of flowers, which were brought out, leaves and petals, from the stone as natural as possible, looking rich enough to ornament a parlor vase, and too delicate for out-of-doors, even in our fine climate, where real flowers are almost perpetual. Evidently Mr. Comb's own hand wrought out this wonderful wreath, for who else but him, on this Coast, could do such equisite work?

Subscribe for the Agriculturist.

THE SAN JOSE BEAUTY.

Prof. A. H. Rockwell met not only with grand success in his excursion through our section of country, giving lessons on horse training to large enthusiastic classes of citizens, but his second advent in San Jose was an ovation. He obtained many more new members to his large class here, and managed to interest large audiences all the time, not only with exhibitions of his skill in handling wild and vicious horses, but by giving rational, common sense instruction and explanations of his methods.

As a token of the estimation in which Mr. Rockwell was held by his class, several members clubbed together and purchased of Mr. Benj. Fish, of Santa Clara, a high-bred Comet colt for $200 and presented it to Mr. Rockwell on the last evening of his visit. The colt was named the "San Jose Beauty," and declared by all present to be a perfect beauty and wonderful for his age. We shall expect to hear from this colt at some future time, as a credit to its name. The colt was worth much more than was paid for him, but Mr. Fish generously consented to contribute a liberal share of the gift. We understand that Mr. Rockwell, before leaving this county, refused an offer of $1,000 for the colt. He says that he will make it worth over $10,000 in three years' time, and we believe him.

The presentation, though a perfect surprise, was a nice little affair. Lawyer Gibson made a fine little speech, and Mr. Rockwell, evidently embarrassed, returned his compliments in a modest manner indicative of the "inner man."

THE BEST HORSE-POWER.

Our readers will notice Mr. Pelton's advertisement of his six-fold horse-power, which, in mechanical construction, is very nearly perfect. The powers have also stood the test of trial; and the evenness of pressure upon the numerous bearings is so balanced that there is less friction to be overcome to a given amount of power than in any horse-power we have ever seen. Fourteen horses have threshed 2,000 bushels of wheat within ten hours, in good threshing, with a Pelton six-fold power more than once. We have examined testimonials of practical men whom we believe to be reliable, and also talked with men who know what the machine will do. The manufacture of these powers in San Jose is an industry we feel proud to note.

THE GREAT MENAGERIE AND CIRCUS.

Montgomery Queen's great menagerie and circus, which has been wintering at Hayward's, California, is about to enter the field for a season's show in this State. Several new and valuable animals and birds have lately been added to the grand collection at great expense, and the best performers in America have been added to the circus troupe, which is now the best that ever performed on this continent.

Lompoc.

A correspondent of the Santa Clara *Argus* writes as follows of this new and flourishing colony in Santa Barbara County.

If there are any of our friends that wish to purchase lands of the company, they would do well to come down before the sales which begin on the 26th of April, as there are only about 2,000 acres of the main valley left. The prices for choice land range from $25 to $75 per acre. Purchasers have ten years in which to pay for their lands. There are over 30,000 acres of grazing lands for sale, including the table-lands near the beach and the rich Hondo valley. The Santa Inez river bounds the land on the east and north. The river is a large stream of clear, pure water, its banks lined with heavy timber. There is a belt of timber running through the middle of the main valley twelve miles long. No purchaser will be more than one mile from timber.

There are four large creeks and numerous springs on the ranch. The deepest well is thirty-two feet, the shallowest eight. Every acre of the valley will produce a paying crop of corn, tobacco, flax, barley, wheat or vegetables, without irrigation. The unplowed lands are covered with a heavy growth of oats, clover and filaria. There is no alkali, no worthless land. Those who do not purchase will at least have the pleasure of seeing the most fertile spot of the State. The town site is the handsomest and best laid out of any on the coast. It is well supplied with the best water by the San Miguelita. Since January 330 lots have been sold at from $100 to $500. Every lot that has changed hands since the sale has been at an advance.

The contractors are ready to begin the wharf, and expect to finish by the 1st of May, 1875. Freight from here to San Francisco will not exceed $2.50 per ton by schooners. Persons shipping should send their freight by Mr. Clayton, of San Francisco, to Point Sal. There is a good road from here to Point Sal. Teams should come by Guadalupe and strike the Point Sal road. It will not be necessary to bring hay or barley, the grass is good and abundant. It will be well for parties coming to bring tents; house-room is very scarce just now.

There are four stores, three boarding-houses and three blacksmith shops. No whiskey will ever be sold on the rancho; families ought to think of this as one of the best recommendations. The company has made ample provision for the future accommodation of schoolchildren.

Thorough Culture.

The theory that there can be no drought in the soil which is plowed so deeply and comminuted or pulverized so thoroughly that the air can strike down into it far enough to come to a temperature below the dew point, is nothing new. That theory, says the *Maryland Farmer*, has been familiar to scientific agriculturists for years. It is founded on the fact that whenever the atmosphere comes in contact with a substance colder than itself, moisture is precipitated, no matter how dry the season may be. So, if a soil be so prepared that the atmosphere can penetrate it to a point where the soil is colder than atmosphere, moisture will be precipitated at that point, and then, by capillary attraction, be drawn through the soil to the surface, whereby whatever is growing or planted in the soil will be refreshed.

This is all very fine where the dew point is above the temperature of moist earth, and the atmosphere is loaded with moisture, but in our dry, sunny climate the dew point is lower than the moist soil, and the soil would dry out instead of collecting moisture from the atmosphere.

I. O. G. T.—GRANGER LODGE, No. 295, meets every MONDAY evening, at 8 o'clock, in their Hall, No 284 Santa Clara street, over the S. J. Savings Bank. Members of sister Lodges and sojourning members in good standing are invited to attend.

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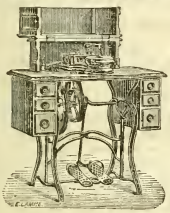

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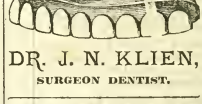

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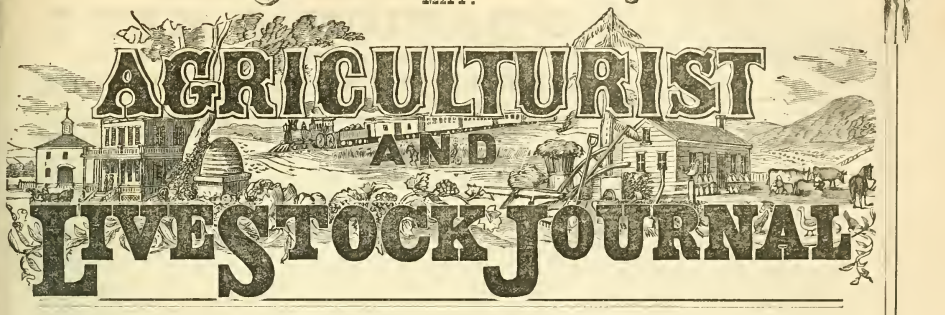

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There are so many new and cheap mills in the market that we feel it our duty to caution our farmers that they look at the mill and not the price, examine the record and know that the mill is one that has been thoroughly tried at least three years by some one. Wind is an unruly element and unless a wind-mill is built upon true mechanical principles and from strong and durable material, it is liable at any time to be destroyed. It costs just as much to erect a poor mill as a good one, and it will not pay to run the chance of losing your labor, time and mill for a few dollars more at the start. There is just as much difference in wind-mills as in cloth. A good article costs a little more but wears enough longer to pay for the extra cost. Being the original inventors and first manufacturers of what is now known as the Solid Wheel Mill, we feel that it is our privilege to caution those about to purchase wind-mills. We commenced over eight years ago, and have faithfully protected all our mills and guaranteed their work. Our mill has been thoroughly tried, and is now in use in thirty-three States and Territories. Seven wind-mill companies are now manufacturing under our license, but none of them are allowed to make our particular mill. By actual test and mathematical calculation we secure 16 per cent. more power than any other wind-mill. We can obtain this because our fans are much wider and two inches longer on a ten-foot mill, and the wheel and tail being in a line the mill gets all the wind. The Eclipse is not a cheap mill, except as an investment. Our mills cost $10 more than the general average price of other mills. We can build a cheaper mill for those that wish it, but having had a long experience, we know that an honestly built mill cannot be made cheap. We are able and willing to guarantee our work, and parties desiring something strong, durable and powerful, will consult their interest by either sending for our illustrated circular or calling on our general agent, Respectfully,

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AND

LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., May, 1875. No. 5.

Correspondence.

CARBOLIC ACID.

Its Nature and Uses.

BY JOHN D. SCOTT, M. D.

EDS. AGRICULTURIST: In 1832 Reichinback discovered in beech tar a peculiar substance which, from the property which it possessed of preserving meat, he called *creosote*, from two Greek words meaning meat-preserver. Two years afterwards Runge discovered a similar substance in coal tar, to which he gave the name of Carbolic Acid, a contraction of carbon-oil-acid. It was contended for some time that these two substances were identical, but upon careful chemical analysis they were found to be distinct articles, although possessing some analogous properties. "It differs from creosote by being decidedly acid, in being precipitated by acetate of lead, and not being acted upon by ammonia and air, but changed by even dilute nitric acid into a red-brown substance; it also precipitates gelatine; all which properties are wanting in creosote." Owing, however to this close resemblance, creosote is often largely adulterated with carbolic acid.

In the shops it occurs in two forms, solid and liquid. When perfectly pure it is found in white masses, or crystals, or in a white liquid heavier than water, but as ordinarily kept the crystals and liquid are of a more or less brownish-red color, owing to impuritics. It combines with lime and other bases, when the products are known as carbolates, some of which are very valuable and largely used in the arts.

It is very volatile, hence its great value as a disinfectant. It is also powerfully antiseptic. A green hide immersed for 24 hours in an aqueous solution of the acid of the strength of 10 or 15 per cent. will be preserved upon drying for years from putrefaction. It instantly deprives stinking fish or meat of its offensive odor, and arrests further decomposition by arresting the putrefactive fermentation. It is therefore one of the most valuable agents in the process of embalming bodies, and in preserving the skins of birds, animals and reptiles from further change in our cabinets and museums.

It was largely used in our late unpleasantness by surgeons on both sides of the Potomac in gun-shot wounds, diseases of the bones and foul suppurating abscesses with the most gratifying results. It not only acted as deodorizer, but stopped at once the putrefactive fermentation, thus striking at once at the root of the evil. The explanation of its salutary results may be found in the fact that their morbid processes are not only originated but kept up by exceeding minute, but poisonous, organisms to which carbolic acid is instant death. By injecting solutions of 5 to 10 per cent. of the acid to the water they are destroyed by the million, and by keeping the parts well bathed with the lotion, or covered with cloths wrung out of it, their recurrence is prevented.

Taken in medicinal doses, say one to two grains or drops to the ounce of sweetened water, and being absorbed into the system, it seems to exert a specific effect upon the kidnays and bronchial tubes, thus constituting a most valuable diuretic and expectorant. Hence the flooding of the market with carbolic troches.

But its most important use has been thought to be in the destruction of those vegetable spores and morbific animalcules which have of late been proven to be the prolific source of many epidemic and contagious diseases among

MEN AND DOMESTIC ANIMALS.

It has been shown that it acts with distinctive agency upon these germs out of the body, and it has been reasonably concluded that it would act with equal effect upon them in the body. With this view it has been administered internally, but not sufficiently long and extensively to demonstrate its absolute merits.

A few drops of a weak solution are sufficient to prevent the mould on ink and other vegetable solutions. In the concentrated form, it is said to have been used to destroy the poisonous effects of dissection wounds. It has been recommended in vomiting, diarrhœa, dyspepsia and flatulence. Whenever putrefaction or even common fermentation is suspected in the stomach, carbolic acid by its antifermentive and anti-septic properties would be of undoubted efficacy.

From the properties of carbolic acid already known and acknowledged it was confidently expected that it would act equally well as a worm medicine; and in the few trials that have been as yet made with it, it has not disappointed that expectation. Against the lumbricoids or large red worms it has been found efficient, and used in the form of weak injection we might reasonably hope to find it equally serviceable against the pin worm so distressing both to grown persons and children.

Owing to its detergent and antiseptic properties it makes an excellent dentrifice cleansing the teeth and the interspaces between them and sweetening the breath.

In scarlet fever, diptheria, erysipelas and other diseases dependent upon a morbid condition of the blood, it may be used not only hygienically but internally with the reasonable expectation of exerting an antiseptic action on that important fluid. Upon old, indolent and foul ulcers, either in the form of a weak lotion or ointment, it acts with great energy by not only cleansing them but by stimulating them to renewed and healthy action.

In the crystals or concentrated liquid form it acts as a powerful caustic, turning the parts white to which it is applied and removing the cuticle, which, before separation, turns to a dark, brownish color. The application produces severe pain, which lasts for an hour or more, and the acid in this form should be used with extreme caution. It is by its powerful caustic effect in killing the nerve that it instantly relieves the toothache; but it should never be used in this way by unskillfnl hands, as it will produce painful eschars in the mouth wherever it touches. Of course, such a powerful disorganizer, when taken into the system, would produce the most violent and fatal effects. A solution of lime in water, which converts the acid into carbolate of lime, would be, put up, the readiest and most effectual antidote.

In itch it acts as a specific, destroying the insect whose presence and ravsges constitute the disease. It is equally serviceable in many other skin diseases, particularly those of the head and scalp. In these cases it is used as a wash, ointment, or bath, In diseases of the ear with purulent and offensive discharges it has been found particularly beneficial. In scalds and burns, in the proportion of 10 to 15 drops to the ounce of water it has been highly recommended. It is said to allay the pain instantly and dispose the parts to heal kindly and without subsequent contraction.

It may be given internally in the dose of 1 or 2 grains, or drops, as the case may be, in one ounce of sweetened water. As a caustic, it is used as obtained from the shops, care being taken to limit its application to the diseased parts. As a lotion to the skin, it may be dissolved in the proportion of 1 part of the acid to 100 or 200 of water. As an application to the throat in scarlet fever, diptheria, bronchitis, catnrrh, etc., as spray in an atomizer, it may be used in the proportion of one grain or drop to the ounce of water, gradually increasing the strength to 4 or 5 as thought advisable. As a gargle in such cases, take 20 grains or drops of the acid, half a drachm of vinegar, 2 ounces of the tincture of myrrh, and 6 oz of water, This is said to fail but seldom in diptheria. As an ointment for cancers, ulcers, etc., 5 grains or drops may be rubbed up with an ounce of lard, unsalted butter, suet or simple cerate, and applied on cloths. As its prophylactic and disinfectant properties are not among the least of its virtues, it may be dissolved in the proportion of an ounce of the acid to one gallon of water and hung round the sick room in cloths saturated with the solution, introduced into the dejections, and sponged from time to time over the bodies of the sick. It is thought to have exerted very beneficial effects, used in this way, in private and hospital practice, in arresting the spread and mitigating the severity of erysipelas, diptheria, puerperal, scarlet, yellow and typhoid fevers. During the prevalence of such epidemics, no house or hospital with a single case of any of these dangerous diseases should be without an abundant supply of this valuable disinfectant. In times of epidemics and pestilences our street sprinklers might be converted into powerful sanitary agencies by the addition of a few ounces of the acid to each barrel of water.

It was thought to have exerted a highly useful effect in checking the spread and moderating the severity of the late

(*Continued on page* 117, *this issue.*)

Benj. Casey. S. H. Herring.

California AGRICULTURIST AND Live Stock Journal.

S. HARRIS HERRING & CO.,
Editors and Publishers.

OFFICE: Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

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" sixteenth Column	1 00 " "

☞ We are determined to adhere to to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

An industrial exhibition will be held under the auspices of the Mechanics' Institute, in the city of San Francisco, to be opened on Tuesday, the 17th of August, 1875, at 11 a.m. and to continue open at least one month thereafter.

Our compliments are due to Mr. Boots, of Alviso, for a box of mammoth aparagus. His locality, near the bay, can beat the world on asparagus. Some of the stalks measured 4¼ inches in circumferance, and many exceeded four inches, and Mr. Boots said that he did not bring us the biggest either.

Great anxiety is felt and expressed on every hand as to what shall we do with the many immigrants who have come and are coming here this dry season, who have not the means to purchase homes and business. The question is simply answered to the point: Encourage families to find cheap lands and settle upon them; aid individuals in finding employment, or give it them if possible; instead of hiring Chinamen because they work cheap, open your Christian hearts and give work to your own countrymen and women, who come here to live, and who need your aid, and are able with faithful work to return your consideration. The country is large enough for millions of industrious people. Let us all encourage the immigrants that are coming, and let John go to the Celestial Kingdom where all his interest and his bones must lie. Another thing. There are many tracts of land now held in large bodies that may be bought up and divided into small farms and sold on easy terms. Here is a chance for the wealthy to show their philanthropy by investing safely and wisely and well.

We call attention to the article from Dr. Scott on "Carbolic Acid." Stock-raisers, sheep-herders and poultry-keepers, many of them, already know the value of carbolic soap as a destroyer of lice, scab, etc. It is only a few years since its efficacy was known. But few scientific authorities, and those only the latest, contain the information which everybody desires. We have often been requested to publish something late and reliable upon this subject, and how to use carbolic acid in destroying animal and vegetable parasites, etc. Dr. Scott is your man. What he has not explained on any point to your satisfaction he will endeavor to do through our columns, if requested by those desiring it.

Give the Children a Chance.—We second the hints here given by a lady in an exchange: "I would give every boy and girl something to raise, which they might enjoy the profits of; the girl could have fruit trees, strawberry beds, bees, poultry; the boys, colts, calves, sheep and farm crops. It should be understood that this must not interfere with regular school or family duties. It should be play-work to earn the wherewithal for greater pleasure. I would treat my children in these matters in the most scrupulous and exacting business way, without any indulgence—leaving them to get the lessons of their mistakes, just as they will have to do in the outside world."

CONDITION OF THE FRUIT CROP.

All over the State the April frosts were severe. We have intelligence from Los Angeles that early potatoes were killed and much fruit injured. When they have such frosts there, the rest of the State must suffer worse. Much fruit at Marysville has been destroyed. All over the State apricots and almonds are cut short, almost without exception, and peaches will be scarce. We notice favorable reports from Santa Barbara only. In some localities even apples and pears are killed—not the trees, but the fruits. About San Jose we have taken pains to ascertain definitely the condition of the fruit crop.

Mr. C. T. Settle, manager of the Alden drying factory, says his apricots and almonds are all killed. The French prune—Petit Prune de Agen—is nearly all killed. The Hungarian prune—Gross Prune de Agen—is half destroyed. The Ickworth's Imperatrice plum, a valuable sort, is not injured. The Black Tartarian cherry is badly cut off; not half a crop. Other varieties a full crop. There will be two-thirds of a crop of pears; the Seckle and other early varieties suffered most; late pears all right. Apples will show little injury; the Red Astrachan and White Winter Pearmain are killed the worst. Blackberries and grapes were not advanced enough to be hurt.

Mr. Patterson, who has the finest prune orchard in the country, says his crop is nearly all killed. The only prune that escaped is the Fellenburgh. His testimony generally agrees with Mr. Settle's. He adds the Bradshaw plum to the list little injured, and says the Winter Nellis suffered worst of any pear. Mr. Patterson's place is on low, moist soil, and he seems to suffer a greater loss from frost than any other one, which is unfortunate.

Judge Archer and Mr. Sweigart, who are largely engaged in cherry orcharding on higher soil, report the almost entire loss of Black Tartarian cherries. The Gov. Wood and Napoleon Bigarrean have escaped injury; other varieties not much destroyed.

Mr. Tarleton, who is an extensive orchardist, reports but little injury to his fruit crop. Early strawberries generally were badly killed, but the late crop will be enough greater to make it up.

LANDS FOR IMMIGRANTS.

If immigrants who come to this State without means to purchase farms in settled districts will strike out for outside public lands, they will stand a chance for homes and fortunes in a few years. But they must be brave and venturesome and enterprising to succeed. We point out a few places. The *Call* says:

We can state, on the authority of the Lakeport *Bee*, published in Lake county, that Deputy United States Surveyor Perrin has just completed the survey and subdivision of townships 10, 11 and 12 north, range 13 west, and of township 12 north, range 12, in that county, which tracts are now open to homestead and pre-emption entry. The *Bee* says that these lands are good for farming purposes. They contain timber in abundance and are well supplied with streams of running water. Lake is one of the most healthful and beautiful of our counties. It contains numerous patches of grazing lands, and is among the first butter and cheese localities of the State. The *Bee* invites population, and there is not, perhaps, any region where the inducements are greater for settlement.

SHASTA DISTRICT.

We are informed by the United States Register of the Shasta District that there are hundreds of thousands of acres in his district of unoccupied land—some good farming, excellent grazing, and fine timber land. This is one of the largest districts in the State. It extends from the town of Tehama to the Oregon line, and ninety miles wide.

One of the most remarkable of the natural features of our State is the existence of two great mountain ranges, running northwest and southeast, viz., the Sierra Nevada and Coast Range of mountains. Near the northern boundary of the State they are connected by means of a latitudinal range, in which stands the grand and majestic Mount Shasta. Mount Shasta among the mountains of this section of the country is like Saul among the thousands of Israel. It is one of the grandest mountains that we ever gazed upon. The contrast between the living emerald and the fairy-like garment of pure white is splendid beyond description. For eight thousand feet or more the mighty giant is clothed with various trees of evergreen, but the upper portion is robed in a garment of virgin purity.

Who would not like to own a fine farm under the wing of this sublime Mount Shasta?

The Sacramento *Agriculturist* thus speaks of Lodi:

The little town of Lodi—formerly known as Mokelumne Station—is one of the most delightful rural retreats in the great San Joaquin valley. As an objective point for immigrants, it possesses many advantages worthy of favorable consideration.

The statistics of the Government show that tobacco costs the nation many millions more than its bread does.

Poetry.

For the Agriculturist.

Grasshoppers.

BY WALTER.

THOU curse of Western emigration—
A scourge, in fact, to all the nation,
And we may say, to all creation;
As great an evil as infation,
Or slavery, ere emancipation;
But one from which there's no salvation
For one whose helpless situation,
With farming for his occupation,
And little under cultivation,
Who raises on his small plantation
Just food enough for Winter ration,
Indulging the anticipation,
And in the self-congratulation
That he has overcome starvation,
While thus in contemplation,
Lends wings to his imagination,
And feels he's under obligation
To the great Author of creation,
His neighbor comes with information
That this four-winged abomination
Is eating up his vegetation,
And comes without an invation,
And yet with a determination
To leave behind him devastation—
Alas! complete annihilation!

Long Lake, Minnesota.

Some One's Servant Girl.

She stood there leaning wearily
Against the window frame,
Her face was patient, sad and sweet,
Her garments coarse and plain;
"Who is she, pray?" I asked a friend;
The red lip gave a curl—
"Really, I don't know her name;
She's some one's servant girl."

Again I saw her on the street,
With burden trudged along;
Her face was sweet and patient still,
Amid the jostling throng.
Slowly but cheerfully she moved,
Guarding with watchful care,
A marked basket much too large
For her slight hands to bear.

A man I'd thought a gentleman,
Went pushing rudely by,
Sweeping the basket from her hands,
But turning not his eye;
For there was no necessity,
Amid that busy whirl,
For him to be a gentleman
To some one's servant girl.

Ah! well it is that God above
Looks u pon the heart,
And never judges any one
By just the outer part.
For, if the soul be pure and good,
He will not mind the rest,
Nor question what the garments were
In which the forms were dressed.

And many a man and woman fair,
By fortune reared and fed,
Who will not mingle here below
With those who earn their bread,
When they have passed away from life,
Beyond the gates of pearl,
Will meet before their Father's throne
With many a servant girl.

Come, Lovely Spring.

Come, lovely Spring, with all thy flowers,
Primroses and violets, come;
Sweet verdure clothe again the bowers—
Bee, let us hear thy hum!
And hearts shall leap, and tongues shall sing,
And welcome forth the new-born Spring.

Thus, e'en as Winter stern departs,
Shall all our sorrows go;
There is the spring-time of the heart,
The spirit's genial glow;
The sun of Hope, with glorious ray,
Drive all the clouds of care away.

Two Simple Rules.

Two simple rules should all observe,
If they would truly live;
Deal justly with each one they serve,
And when they're wronged, forgive.

If by these rules their life they'll guide,
Each heart with love aglow,
Their days on earth will smoothly glide,
True happiness they'l know.

Christian Advertising.

I'm a poor, hard-working farmer, that's never done no harm,
But have labored hard for fifty years to clear my little farm;
And my dear wife has churned, and spun, and toiled with all her might,
From long before the break of day till after candle-light.

We read our Bible, Sundays, and the Christian paper, too;
As our paper recommended some bonds at ten per cent,
I called my woman to me to see if she'd consent
To selling off our homestead, that we might thus invest,
And, living on the ten per cent., to end our days in rest,

Our pastor came to see us, and approved of the idee;
"I'll put five thousand dollars in, 'tis all I have," says he—
"The savings of my three score years, for I am growing old,
And 'twill make me independent while I watch my little fold."

I'm stopping at the poor-house now; somehow my bonds don't pay.
Thank God! my darling did not live to see this dreary day;
For when she heard the neighbors say we'd come upon the town,
It somehow broke her noble heart! she kinder wilted down.

But most of all I pity them who put the notice in;
For how their homeless children must now be suffering!
Their wives must take in washing, and must scrimp in every way,
As the bonds they had such faith in don't somehow seem to pay.

When I heard the old man's story, a vision rose to view
Of splendid brown-stone mansions on a spacious avenue,
And how their pious owners must enjoy the text to see:
"As to the very least of these you did it unto me."

—[G. B. Bartlett, in Christian Register.

The Temperance Picket.

Out on the edge of the cold curb-stone,
In front of a whisky saloon,
She calmly sits in her small camp chair
By the light of the rising moon.

She pays no heed to the passers-by,
As they hurry adown the street;
Some smile, some jeer, some pitying look,
But she patiently keeps her seat.

No breastplate of steel protects her form,
Neither weapons of modern fame;
"Good will to men" is her only shield,
And her watchword is Jesus' name.

She uses no force to keep men back
From those dreadful pitfalls of sin,
But quietly touching him on the arm,
Says, "Please, sir, I would not go in.

"You have a good wife, and children, two,
Who are watching for you to-night;'
Just pass along and gladden their hearts
By turning again to the right."

He stops, he listens, and, with a sigh,
He says in a faltering tone,
"Too true, alas! I will promise henceforth
To let the accursed drink alone."

"Your name, if you please, just write it here;"
And he stoops, in the pale moonlight,
To sign the pledge, then proudly declares
He will be a new man from that night.

One brand is snatched out from the burning,
To life and liberty given—
One soul turned from darkness to light,
And sent on the straight way to heaven.

And still at her post she calmly sits,
As the long, weary hours go by,
The cold March winds blow over her cheek,
And the stars look down from the sky.

The crowd has gone and the street is still,
Save the creaking of a wicket.
And thus till midnight she watches on—
God bless the temperance picket!

H. M. A.

Love.

'Tis never winter in the heart
So long as love remains;
Let snow and sleet around us dart,
A radiant summer reigns.

We brave the cold and have no fear,
We face the storm with glee,
For love is life and summer cheer,
A paradise to me.

Not the First Class.

[Read at the Mad River Valley Grange, Moretown, March 11th.]

"I thought of the Grange, of the use it would be
To even a forehanded farmer like me;
But I found out in season to let it all pass
That the order of Patrons is not the first class.

"I know it is social to meet once a week;
It is good for the farmers, for there each may speak
Of what is his interest, what he has learned,
Or talk of low prices that merchants have spurned.

"I know all of this, but still I don't dare
To send in my V and become a member there.
Now I am looked up to; 'tis caste I regret,
For I might lose in favor with the popular set."

Now these are the words of a farmer I've seen,
Who counts on his acres and does not once dream
That riches take wings; if his should not last
He'd then be no longer one of the first class.

It matters not now whether Granger or not,
The traders may flourish, it harms not his stock,
For when he has purchased, wherever it's been,
Because he is wealthy they'd discount for him.

He takes this advantage to add to his store—
Thinks less of the Grangers than ever before;
His neighbors must suffer, whose profits are less,
No Wonder they're seeking to gain some redress!

We know that the farmers have so much to do;
Their time for improvement is very short too;
They must work on the farm not an hour let pass;
This must be the reason they're not the first class.

As they get fair returns for their labor, 'tis plain
They'll have more time to read and knowledge obtain;
While here at the Grange we may also excell,
Become better informed, and find pleasure as well.

The day is fast coming when farmers will be,
As a class, as respected as any we see;
While the few who by influence their calling disgrace
I think in the Grange would be out of their place.

Let the shrewd politicians, lawyers, traders and all,
Scorn us now if they will, yet while will yet have a fall.
We'll be upright and honest, shun monopolies en masse
And Grangers ere long will be called the first class.

H. M. Montgomery.

Physiology.

If you are about eighteen years of age, you have 160 bones, and 500 muscles; 25 pounds of blood; your heart is 5 inches long and 3 broad; it beats 70 times a minute, 4,200 times an hour, 106,800 times a day, and 36,722,200 a year. About 2 ounces of blood are thrown out of it at every heat; so that it disburses about *seven tons* of that life nourishing element every day. Your lungs will contain a gallon of air, and you inhale 24,000 gallons a day. The weight of your brain is something over three pounds, and the number of nerves upward of 10,000,000. Your skin is composed of three layers, and varies from one-eighth to one-fourth of an inch in thickness, and is subject to a pressure of 15 pounds to the square inch. Each square inch contains 3,500 pores, each about one-fourth of an inch in length, making an aggregate length of the entire surface of your body of 201,166 feet. A tile-ditch for draining the body, almost 40 miles long.

We are sorry to learn that the supposed strong firm of St. John, Abbott & Co., extensive dealers in stock, have failed, with liabilities exceeding $250,000. A meeting of the creditors of the firm was to have been held in San Francisco on Monday. We understand that the firm states that if an extension of time is granted by the creditors, they will be able to meet all demands. The firm has been largely engaged in buying and selling cattle in Fresno, Tulare, Kern, Monterey, San Luis Obispo and San Francisco counties for years, their transactions yearly ranging in the millions. In this county they were noted as the lessees of the Laguna de Tache grant, near Kingston. Among the heaviest losers in this county are Justin Esery and Gilroy & Co., but a large number of others are in for smaller amounts. It is to be hoped that the firm will be able to relieve itself from its present financial embarrassment. The heaviest creditors of the firm, we are informed, reside in San Francisco.—*Fresno Expositor.*

EDITORIAL CORRESPONDENCE.

HOLLISTER, April 19th.

SAN JOSE TO HOLLISTER.

For our own gratification and information, as well as to gather up fresh inspiration from the country for our pen, we have taken a trip southward through the Santa Clara and San Benito valleys; one grand extension of valley lands lying between the coast and Diablo, or Gabilan, ranges of mountains, that join a few miles south of Hollister into broken, rugged, rounded hills, valleys and peaks extending for many miles further south. From San Jose to Hollister the valley is almost continuous—occasionally interrupted by hills stretching out across the level lands to add variety to the incomparable scenery. On either hand are beautiful farms where the land is not monopolized by the Murphy and other grants. Where it is, are broad acres, inviting only to mock the immigrant who would settle; it is virtually fenced against civilization and improvement. What a shame that *such* vested rights are superior to the rights of man, to the earth as to the air we breathe.

The April frosts, together with winds and drouth, gives

VEGETATION

a brown appearance quite discouraging to farmers. But the few warm days lately have given a fresher green, and although a full crop is not possible without rain soon, yet there will be only a partial failure.

GILROY.

Gilroy is a very pretty town indeed, but does not present the appearance of a very flourishing town. There are too few small farms, too much land and property monopoly, and not enough encouragement for enterprise in competition with Chinese labor which the tobacco business has brought into the place. And, by the way, we are credibly assured that this tobacco business is a curse to Gilroy as a town, and of no benefit to the country around; that the tobacco is not of as good quality as it is reputed to be by the influential company that controlls it. The leaves grow gummy in our dry climate, and the flavor is too strong. We are no tobacco man in any sense, but have been observing the movement until we are satisfied we can say no good of it.

SAN BENITO VALLEY.

From Gilroy to Hollister is a fine farming country wherever the land is divided up into farms; but we can never ride through unoccupied tracts held by monopolists without feeling rebellious against a system that will permit such a thing. The crops about Hollister look even better than in the Santa Clara valley. It is evidently not the dry and uninviting place that some have represented it to be.

We had not seen the place in four years, and although we expected to see improvements, were surprised at such evident signs of prosperity. The town itself shows not so much of acquired wealth in expensive buildings as of business enterprise which is the foundation of wealth. The residences are nearly all pretty, one-story, painted houses, with front yards neatly fenced and set out with trees, shrubbery, vines and flowers, just such houses as well-paid mechanics, tradesmen and laborers can own, and which are the best indication of prosperity and comfort.

Years ago, while the valley was still a sheep range, Col. Hollister planted some pepper trees around his residence. These are now fine, large trees, and from them seeds have been planted everywhere, and Hollister is consequently beautified from one end of the town to the other with this magnificent evergreen. There is no finer street or ornamental tree than the graceful (*Schinus molle*) South American pepper tree. It will grow in the dryest places without irrigation but is susceptible to moisture, and in rich soil makes large trees. The old trees here are splendid specimens, and the young ones grow remarkably rapid, as does everything else which is cultivated in this fertile valley.

While this whole region was occupied as a sheep ranch it was thought fit for nothing else. It was not supposed that a crop of grain could be grown in any season, or that it could ever be covered with farms, circling about so flourishing a town. The experience of old Californians who had seen the country settled up in other sections, where it was previously thought to be equally as ill adapted to cultivation, gave a few confidence in this place, but the majority of persons who saw the big sheep ranch were incredulous. The associating who bought it up, divided it into farms 170 acres, with a town laid off into squares and lots, have proven their wisdom, and not only made homes, but in the rise of property have acquired more wealth than years of labor could accumulate. Finer farms cannot be found in the State than some of those about Hollister, so far as good soil, facilities for market and beautiful surroundings are concerned. A few are well improved and many are being improved as fast as the means of the owners will admit. The best assurance of an advancing civilization is that the land is owned in small tracts by actual settlers. On the richest soil near town there are many five and ten acres places cultivated as gardens, orchards, etc., where wind-mills are being erected and homes built. Fine schools, public and private, several and other public enterprises, speak well for the place. The place is only about six years old, and of course everything is new—in fact, in town and out, it is not half grown yet; but is like a promising child.

The branch of the Southern Pacific Railroad that terminates at Tres Pinos, six miles south, runs through Hollister, and over it is transported the wheat and other products that seek San Francisco for a market. A narrow gauge railroad will be built to connect with the Salinas and Monterey road and with the road that will run to Santa Cruz and up the coast.

Not only does an immense section of stock and agricultural lands center upon Hollister as a trading post, but there is lying to the east and south a large mining country, rich in quicksilver and other metals. Its prosperity is not only assured by present developments, but the prospects are all flattering. Hollister's location must always be in its favor. We might give an array of statistics that would be interesting, but these can be obtained elsewhere.

All arrangements have been perfected, and pipe purchased, for bringing water from Picacho creek, about eight miles distant, pure mountain water, to supply the town. The well water is not bad, only a little hard. Upon the top of a bluff-like hill at the north of the town, which commands a view of the surrounding country, will be placed a reservoir.

To-day we have taken a ride among the farms over a portion of the San Benito and Santa Anna valleys. The latter is a small, beautiful valley, nestled among hills, six to eight miles east of Hollister, and covered by some twenty farms—a perfect gem of a valley, such as can be found nowhere else on earth but along our Pacific slope. Here are fine farms of level land, well fenced, and pastures on either side reaching into and over the hills. Grand oak trees, in clusters, afford shade and protection for farm houses and stock, and add much to the loveliness of the scene. In the center of the valley is a school house, the seal that stamps our country to independence and freedom forever. Here are fine fields of grain and flax.

FLAX GROWING

appears to be quite an important matter in this section, and even about Hollister, in every direction. Notwithstanding the dry season, full crops of flax will be grown on many farms. On the farm of John A. Reed is a large field of as fine flax as can be seen in any season in any country. It is the variety known here by the name "California Coast," or "Monterey" flax. It is a tall-growing sort, with fine seeds. Another kind, known by the name of Chili flax, a shorter-growing kind, with plump, large seeds, does not look as well this dry year, but is said to be a fine kind in wet seasons. The best field of flax we saw was sown just after the last heavy rains. But it is the opinion of experienced farmers that, one year with another, it is best to sow as early as possible; the same as with grain, the early sown averages the best. Mr. M. Pomeroy, who has a very fine field of flax, says that some fields will average twelve to fifteen hundred pounds to the acre this season. The late sown will be light, but it is thought the whole average yield in this section will not be less than eight hundred pounds to the acre. There are many fine fields of

WHEAT AND BARLEY

in spite of the dry weather. The extremely cold spell that did so much damage throughout the State had a serious effect here. But, notwithstanding the reputation of Hollister as a dry place, the crops will average very good without more rain, wherever the crops were well put in early in the season, or before the last rains.

The finest field of barley we saw was on the W. P. Phillips farm, sown early on light but rich, well-cultivated soil. The best wheat was on heavier soil that was not plowed over three inches deep, but was very thoroughly plowed with narrow plows and finely harrowed. We find but few adherents to the deep plowing theory. The most of old Californians know better from experience; but none can plow or cultivate too thoroughly or too much when the soil is in suitable condi-

tion. Much land was plowed when too wet; some was allowed to lay in this condition till it was baked into lumps that no harrowing could pulverize. Of course, on such soil only light crops will be produced. Much land was too lightly harrowed after plowing and seeding—merely scratched in. Such shows the drouth, and is spotted. Farmers who are careless, or by trying to do too much do not do it well, are the ones who will be punished.

We saw no summer-fallowed crops, but we found many advocates of the system. The objection seems to be that one can hardly afford to let land lie idle a whole year to get a crop the next, when four years in five a good crop is assured without all that trouble. Several are talking of trying it, though, on about one-quarter of their land another year, "for luck." One thing they are determined not to do any more, that is, to *wait* to see whether it is going to be a good season before sowing their grain. Several who did wait, then sowed after the last promising rain on muddy soil, will have to harvest by pasturing. Had late rains been abundant, the late sown grain might have been the best.

THE PRICE OF FARMS

of 170 acres varies from $40 to $75 per acre. Rich garden spots at San Felipe and near town range from $200 to $400 per acre, in small lots, and are advancing all the time.

AN IMMENSE ORCHARD

of over 300 acres, in one body, on what is called the San Joaquin Ranch, four miles northeast of Hollister, was this Spring set out by Flint, Bixby & Co. There are 65,000 trees in this little California orchard, mostly almonds, but numbering many prune and apricot trees. The soil is gavelly adobe, easy to work, and rich enough for the purpose. With proper care, this orchard will, within half a dozen years, speak for itself. One can ride nearly two miles alongside of it in a straight road.

ARTESIAN WELLS

are being bored in this and adjoining valleys. At San Juan are two fine flowing wells 150 feet deep. At San Felipe are several flowing wells. We saw Mr. Patterson, the well known well-borer of San Jose valley, boring a well on Phillips' ranch. He has gone 410 feet through rich soil, and expects soon to strike a flowing stream. We couldn't help thinking how would some of the farmers in New England like to have 400 feet of soil dropped upon their farms, where stones are the principal crop. But in California valleys, for miles and miles in extent, anywhere from 50 to 500 feet of soil is nothing to be wondered at.

EXTRA VALUE OF FINE OVER COMMON CATTLE FOR BEEF.

While at Hollister we had a long conversation with Mr. Oscar Peck, an old friend and experienced butcher, on the question of comparative values of common and well-bred stock for beef.

Mr. Peck says that Spanish steers five years old will average about 500 pounds dressed weight, while one-half to three-fourths Durham or Devon steers, same age, will weigh about 700 pounds; also, that owing to the heavier hides, more rough tallow, and extra heavy loin and prime cuts of beef, the fine cattle will average worth to the butcher one cent per pound more on foot, dressed weight.

Let us look at the figures. Common beef, the present time, is worth five cents on foot. A five year old fat Spanish steer, 500 pounds, would bring $25. An improved American steer, same age, would weigh 700 pounds, and be worth six cents, or $42—a difference of $17 per head in favor of good breeding. The cost of raising the well-bred animal is no more than the low bred.

Last Christmas Mr. Peck bought six head of Cotswold and Southdown cross-bred fat sheep for $6 per head that weighed, dressed, 120 pounds each. The pelts sold for $2 each. Common fat sheep were worth $3 50 per head at the same time, and would average only 50 pounds each—pelts worth $1 25 each. Any one can figure for himself the superior profit of the fine sheep to the butcher.

If farmers generally fully understood the amount of clear profit there is in breeding and raising only the best breeds of stock, there would be everywhere a demand for the best, and fine breeding males to grade up the common stock would be the order of the day. It costs too much to raise cattle to sell them at low prices with profit. It is what can be realized above cost that counts, and viewed in this light there is at least three to one in favor of well bred stock.

A NEW AND IMPORTANT INDUSTRY.

There has just been established in San Jose an industry that must prove of great importance to California, and of interest to our citizens and all inhabitants of the Northern States especially. It is a dyeing house and tannery for the tanning and coloring of Angora goat pelts and preparaing them for use. Mr. Henry T. Welch, who served an apprenticeship at fancy dyeing in Portland, Maine, his native place, and who has been employed as dyer at the San Jose Woolen Mills some four years, has, after three years experimenting, succeeded in dyeing Angora goat pelts a beautiful, glossy, permanent black without in the least injuring the skins. There has been no difficulty heretofore in coloring the mohair alone with the use of hot dyes, but to color pelts without ruining the skins has been something that no other man in America has succeeded in doing. One or two firms in Europe have dyed furs and pelts black, but even they do not leave the skin strong and soft. Mr. Welch has perfected a process of his own that surpasses anything ever before discovered. The natural gloss of the mohair is not only not injured, but seems to be intensified. The dyes do not have to be applied hot, yet they so permanently color the mohair that no acids alter the color, and even chlorine gas will not destroy the black. Mr. W.'s attention as first called to this matter by some Angora goat raisers who wished to get pelts colored. He experienced no difficulty in coloring any excepting dark brown and deep black colors. His success is the reward of an indefatigable determination and long, patient experimenting.

Mr. McCracken, of Lewis & McCracken, Angora goat breeders, San Jose, has entered into copartnership with Mr. Welch in this enterprise. The firm McCracken & Welch have erected a dyeing house and tannery on the Guadalupe creek just west of the San Jose Woolen Mills, where they are prepared to tan as well as dye sheep, goat, deer, wolf, fox and other skins and furs in any quantity and in a manner that cannot be surpassed in the world. They prefer to tan the skins they dye, as the dyeing process is best commenced before the skin is completely tanned, and when the work is finished it is nearer perfectly done in every respect. But they can color the fur on skins that are already tanned, and finely, too, but it is more trouble to do so.

We have visited the establishment, examined the skins and the tanned and colored pelts, furs, etc., and are satisfied, as is every one who has examined the work, that success is certain.

Now as to the importance of this discovery, it can hardly be over-estimated. There are no prettier or better buggy or sleigh robes than can be made of colored Angora goat pelts. The glossy mohair is heavy and wavy naturally. No better over-coat robes for cold countries can be made of any material. The skins can be taken from the animals as soon or as long after shearing as one chooses, and long or short fur or mohair is the result. We have seen ladies' capes and cloaks made and trimmed with Angora that were very beautiful. There is no nicer trimming than a pure white or black Angora strip from a tanned pelt.

Now that the buffaloes and fur bearing animals generally are getting scarce, the Angora will be found an excellent substitute for many purposes; and now that the breeding and raising of Angora goats on this coast is proved to be a success, and must become a great industry, the matter can at once be seen to be quite important. Half the annual increase of all flocks are males, chiefly valuable for pelts and meat until they are very high grade, when of course the mohair will be valuable for some years before killing. But every goat above a three-fourths grade will make a valuable pelt whether young or old. The market for these beautiful and valuable pelts will be almost unlimited and as wide as the uses to which they may be put.

We will not overlook the fact that the Angora pelts have been beautifully tanned and finished and manufactured into robes for some years by Mr. Eberhardt, tanner, Santa Clara. Mr. E. deserves much credit for his enterprise in this department of his business. He has given much encouragement to the breeders of Angora goats, and demonstrated the wide utility of the tanned pelts. The dyeing of them by Mr. Welch has put the finishing touch to the trade, and as a result a new impetus will be given to the Angora business, and wealth will flow to our State in equal proportion to the demand and supply, which must be continually enlarging.

Along the river, above Sacramento, for a distance of eight or ten miles, there is one vast alfalfa field, some of it standing waist high. The farms here are generally divided off into small fields, and hogs, cattle and sheep kept in the different divisions.—*Sac. Agriculturist.*

WHAT SHALL WE DO WITH OUR IMMIGRANTS?

The question "What shall we do with our immigrants?" is forcing itself upon us as the thousands are coming overland this season. A dry year and short crops will not make the matter any easier of solution. If this country was open to settlement—in other words, if our lands now held as grants and that have been gobbled up in large tracts by speculating land pirates, were open to preemption—there would be a chance for poor people to help themselves. But as it now is they are virtually "fenced out," and left to starve on the highways and byways of our State. The country is broad and beautiful, the climate is genial, the soil prolific, and only needs the hand of industry to make it yield abundantly for all. There is plenty of room for many thousands of homes. But the selfish greed of dishonest men, under a system that allows robbery to run riot, and that protects villainy against individual right in our free country, has brought about such a condition of affairs as gives no encouragement to individual enterprise unless backed up by money enough to buy out somebody that holds titles to the lands. Then again, the State is flooded by Chinese menials who can live upon very little, and who labor for less wages and board themselves than any other mortals upon the earth. There is little demand for intelligent men and women at remunerative wages, to work for those who employ labor. The immigrant is doubly barred out. The broad lands are not accessible without a toll that a poor man can not pay, and his labor cannot be readily sold at a remunerative price in competition with the Chinese. Capital has no soul, and only seeks to aggregate to itself, at the expense of human effort, everything possible. There seems to be but one principle in business, *i.e.*, to make as much money at once as possible. Human wellfare is not taken into consideration. Money is not the servant—does not conserve the interests of man, but is the grand hard master that rules and ruins with inexorable pressure. So terrible is this monopoly that but few persons are willing to devote money to advancing human welfare, even when the probabilities are that it will be returned. Our civilization is predicated upon money; mankind worships it, is a slave to it, and suffers martyrdom for it, to be crushed by it. And for the reason that we are so cursed, our civilization is very nearly a failure. While anything we can say will not remedy the matter, we cannot help deprecating the conditiou, and feeling solicitous for the many new comers who desire to make homes amongst us. The class of people who come here to live are just such as we need to settle up the State, advance the industrial interests, build up schools and further the general prosperity of the whole people. It is a narrow despicable principle that would throw stumbling blocks in the way of encouraging the settlement of this State by making it difficult to get homes and to obtain labor. And it is the evident duty of every one who has a feeling of humanity and patriotism in his bosom to do all he can to remove all impediments and to give all the aid and comfort possible to every family that enters the State to make their homes amongst us.

WHAT ARE GRANGERS GOING TO DO ABOUT IT?

Probably more than one half the immigrants that have been induced to come to California this year have been induced to do so through the representations made by the Immigrant Aid Committee of the State Grange. If there is destitution, want of work, no chance to get homes, and suffering amongst those who are willing and anxious to work and cannot, the Grange will be largely responsible for it. The placing of such a man as Josiah Earl at the head of affairs to take advantage of the necessities of immigrants who, having confidence in the Grange, allow themselves to be directed by him, is a mistake that should be at once remedied.

No member of the State Grange has taken any notice of the investigation of the Committee on swamp and overflowed lands, a portion which we published last month. Why not? If they recognize Mr. Earl as their agent, are they not to be held responsible? We demand of the State Grange to know why they place such men at the head of so important and responsible a position.

We are not at enmity with the Grange. We can never consent to see the influence of the Grange subverted to the uses of the most villainous land pirates in this piratical State to prey upon immigrants without putting in a protest.

The Agriculturist is in every sense a friend to the poor and deserving, and in no sense a supporter of intrigue in any respect. The leaders in the Grange have steered very shy of us. They have never communicated with us, or rather through the Agriculturist to the people, as they have done through several other journals. Honest men are not in the habit of discarding honest means, and we challenge the State Grange Executive Committee to give one honest reason for treating the Agriculturist as unfriendly to Grange principles or as being unworthy of the confidence of honest men.

Every Grapger in this State has a right to know what material the immigrant aid committee, or agency, is composed of, and what it is doing. And it is clearly the duty of every Granger to lend all the aid possible to immigrants, to assist them in obtaining homes, employment and honest treatment. Let your humanity become materialized in good works.

RECLAIMING ALKALINE SOILS.

Experiments and practice in Utah, Colorado, Nevada and California have proven that the way to reclaim alkaline soils is to first obtain a good drainage, then flood with water and leach the salts from the soil. On light soils that water will readily penetrate and drain off through the subsoil, no difficulty has been encountered in producing fine crops where irrigation is applied, from the very first season of cultivation. The alkali, when washed out of the surface soil, is prevented from rising again by irrigation. But let the surface get dry, and as the moisture raises from below the alkali held in solution rises with it of course, and as the water evaporates is left upon the surface.

It is found best to underdrain where the soil is fine and heavy, then irrigate copiously the first year and drain the alkali out as much as possible. As the alkali deposited in lower depths cannot arise unless brought up by moisture, the policy is to keep the moisture from raising either by irrigation or such fine surface cultivation as to prevent the loss of moisture through the surface into the air.

The correct principle once understood, the reclaimation of alkaline soil proves to be very simple. There is no richer soil on the coast when it is once reclaimed and well managed, and it is inexhaustible. Indeed the very alkali is only an overplus of rich earthy salts which would be a fortune to some farms in the East, where there is more acid than alkali in the soil. It seems to us that if some persons we know of, who own alkaline soils, only knew how valuable they would be if once reclaimed, and how easily they might be rendered fertile, they would not let them lie idle in poor pasture year after year, as they do. It would be a good investment for some enterprising man to buy such places and develop them into splendid farms.

SUMMER-FALLOW—REASONS WHY

The want of rain sets many persons thinking about summer-fallowing and how to so cultivate the soil as to best economize the moisture it contains for plant growth. Experience has abundantly proved that crops of grain can be produced on land that has laid fallow a year when adjoining lands that raised a crop will fail from drouth. In seasons of abundant rains it is, perhaps, economy to crop all the ground, or would be if one was oure the following season would also be wet enough. But in this uncertain climate it certainly is policy for every farmer who lives upon such soil as depends upon the rains for moisture, to every year fallow a portion of his farm. He will not be much injured by so doing in good seasons, and will be greatly benefitted in dry ones, as all must admit. We notice that on all lands that laid fallow last year there is promise of fair crops this season. We notice that the prevailing opinion or notion as to why summer-fallowing land helps the next crop, seems to be the idea that *resting* the soil is what helps it and makes it produce. Men whose knowledge of chemistry is very limited will insist that it recuperates the soil to lie so long idle; that gasses in the air penetrate the soil and supply material for new growth, etc. A little of such philosophy is enough. The real reason is simple and satisfactory without such conjectures. Soil which lies fallow retains its moisture through the season, if it is left in proper shape, and, of course, another season's rain added to it fills the soil with moisture sufficient to withstand drouth and make a crop without late rains in the Spring. So far as the rest to the soil is concerned, it needs no rest, and may be cropped perpetually if supplied with water and manure.

On farms that are not very badly affected by drouth, it is found better to rotate crops than it is to summer-fallow. For instance, where grain was grown last year, let it volunteer for hay this, cut early and pasture the balance of this season and next year, then

put in grain again, and the grain crop will be as good as on fallowed land, and the soil will give a return each season. But on very dry soil summer fallow is the only sure method of getting a full crop in any season.

The proper depth to plow when summer-fallowing is another question of interest. We do not think it makes much difference. To plow deep a great expense of power must be used, and even then it will be necessary to have the surface finely pulverized to resist the drying effects of sun and winds and retain the moisture the most completely. Shallow plowing, or thorough surface cultivation without plowing, will answer the same purposes. All that is needed is to make a few inches of light soil for a mulching on the surface, which should be stirred often enough to keep all weeds from growing, and be just thick enough to prevent the escape of moisture from the soil into the air by evaporation.

Some persons have acquired the idea that loose earth will condense moisture from the air, and think that if they stir the soil deeply it will obtain all needed moisture without rain. This is a serious mistake, in our dry climate at any rate. Practice will prove that if you want your soil to dry out fast the best way to do is to stir it deep and often, and science will show you that the dew point in our dry climate is lower than the temperature of the soil in Summer, hence the impossibility of such condensation.

The fact is, we have to depend upon what moisture there is stored in the soil for our crops, and we should see that a sufficient amount is stored there to produce a crop, and then so cultivate the surface soil as to prevent its escape into the air.

On soils that can be irrigated, or that are furnished with abundant moisture from below, as bottom lands are, it matters not so much what is the method of cultivation, so long as the soil is not plowed too wet or allowed to bake.

The object of this article is to show the use and rationale of summer-fallowing from a practical stand-point. If we cannot make it rain, and so make it an object for farmers to take the Agriculturist, we hope to give enough hints applicable to the conditions of our climate to compensate the want so far as we are concerned. There is certainly need enough of a correct understanding of how to treat soils to the best advantage in California, for we find many conflicting theories among farmers concerning this thing.

Not long ago jute fibre was known in Europe only in the form of gunny bags. A paper read by Professor Hodges at the last meeting of the British Association, states that last year 100,000 tons of the fibre were imported from Calcutta into Dundee, while London, Liverpool and Glasgow probably receive half as much more. It was formerly thought that jute could not be bleached, and therefore, that, with all its strength and other good qualities, it could be used only for bags and coarse fabrics. It is only in this raw state that it is worked up in the United States, at least until lately. In Ireland and Scotland the bleaching process has succeeded perfectly giving to the fibre the whiteness of linen fabrics, into which, indeed, it largely enters. It is largely worked up with silk, and makes the best substitute for hair, most chignons being made of it, while the dust from the mills is employed in the manufacture of silk hats. So that jute is largely worn by both sexes.—*Queenslander.*

Hygienic.

Another Physiological Lesson.

BY ALFRED POWER, CHIEF COMMISSION OF POOR LAW, IRELAND.

NO. II—THE BLOOD.

SIX thousand years after his era began
The astonishing fact was discovered by man,
That the blood in his body does not remain still,
But rushes along like the race of from a mill.

Certain vessels called arteries, hidden within
The body, conduct from the heart to the skin;
While others called veins throughout every part
Of the system conduct from the skin to the heart.

The heart every instant gets filled with new blood,
Prepared, as you'll see, from the air and the food;
And this new blood is driven throughout the whole frame,
As from a force-pump, by the force of the same.

The blood in its passage leaves everywhere
Some of what it has got from the food and the air,
Which is all taken up ere a moment is gone,
To replenish the tissue, the fat and the bone.

Throughout the whole structure—bone, muscle and skin—
Where the arteries end the veins begin,
And changing its color from red blood to black,
The blood enters the veins and is so carried back.

When the old blood arrives by the veins to the heart
It is mixed and churned up, in a chamber apart,
With a thick, milky fluid, nutritious and good,
Which the stomach and bowels have drawn from the food.

It is then driven off by a similar force
To the lungs, where the air cells receive it, in course,
Where at every breath it takes up through the skin
The material parts of the air within.

Thus regenerate, vigorous, lusty, and red,
And once more forced back on its fountain head,
To the artery chamber it rushes again,
And is ready to start upon service again.

What we get from the air is equal in weight
To what we derive from the food that we eat;
But what we breath out, I must tell you once more,
Is of poisons the worst, as I told you before.

In a much clearer light you now may perceive
What it's hoped you'll hold fast and devoutly believe,
That for health and enjoyment the very best fare
Is the soundest of food and the purest of air.

Then show that you value your blood and your skin,
Remove every nuisance without or within;
Obey all the laws that are made to that end,
And regard the inspector of health as your friend.

If your house has a taint, employ in good time
Either carbolic acid or chloride of lime;
But of all disinfectants the earth is the best—
Smells covered by earth are forever at rest.

With all these precautions don't fear any harm,
And yield to no panic or foolish alarm;
When the enemy comes be brave but prepared—
Survey your defenses and stand on your guard!

Disinfectants and Deodorizers.

Infection and ill smells cause a great variety of diseases; they both arise from decomposition and decay of vegetable or animal matter, or both. To deodorize is to take away the bad smell. To disinfect is not only to do this, but to arrest the progress of decay, and thus cut off the supply of a bad odor. Our grandmothers thought they got rid of the ill odor of a sick-room by sprinkling brown sugar on live coal or burning tar; this gave a strong and more agreeable odor; it overpowered the other so that it was not perceived, but did not destroy it; both odors were really present, and the air was doubly impure, though more agreeable to the senses. Hence, to deodorize an ill-smelling room or locality intelligently, substances must be used which, by causing a new chemical combination, destroy the odor altogether; but if the decomposition continues to go on, other odoriferous particles begin to arise requiring a new application of the deodorizer; on this account all deodorizers are efficient only temporarily; hence, the only rational method is either to remove the offending material or employ disinfectants which arrest further decay. If the material both arrests the decay and destroys or absorbs the ill smell, then it is doubly valuable. Two hundred grains of chloride of zinc in an ounce of water is a powerful agent in neutralizing bad smells and in arresting both animal and vegetable decomposition, in ships, hospitals, dissecting rooms, cellars, privies, and water-closets, without having any ill smell of its own. For disinfecting purposes, mix one pint of the above fluid to four gallons of water.

There are three powerful disinfectants: carbolic acid, but its smell is objectionable, chlorine and permanganate of potash; these last two are quite expensive. These disinfectants act by combining with deleterious substances and rendering them harmless, while antiseptics prevent and arrest the decomposition of animal substances.

The only perfect disinfectant is habitual cleanliness and thorough ventilation; next to that is a dry heat of two hundred and fifty degrees.

The most common and available disinfectant and deodorizer is copperas, crude copperas, sold by druggists at a few cents a pound under the name of sulphate of iron, one pound to two gallons of water, to be used as often as necessary to render all odors imperceptible, acting at the same time as an antiseptic, deodorizer, and disinfectant, and if instantly thrown over what passes from the body in cholera is one of the cheapest and best means known for preventing its communication to others.—*N. J. Mechanic.*

[The above is a valuable article, and should be preserved. There is far too great neglect of disinfectants and deodorizers. For many purposes the information here given is invaluable. But for all out-door uses, earth—dry earth is altogether the best. The only difficulty there seems to be in introducing it into use is that it does not cost anything and is found everywhere ready for application. If it were found only in certain localities, and to be bought at a price, its merits would soon be recognized. For cess-pools, or out-houses, nothing else should be used. Yet often do we see people going to a distance to buy lime, when three steps would take them to good, loose earth, all ready for use.—*Health Reformer.*

Importance of Wholesome Beds.—Sleep to the working man is emphatically Nature's restorer—reinvigorating the physical system, which through much toil has become weary, and keeping up the flow of life and spirits which are necessary to the performance of the arduous duty of farm-life. A comfortable bed, as we are all aware, conduces greatly to one's rest. On this subject a recent writer says:

Of the eight pounds which a man eats and drinks each day, it is thought that not less than five pounds leaves his body through the skin.

And of these five pounds considerable percentage escapes during the night while he is in bed. The largest portion of this is water, but in addition there is much *effete* and poisonous matter. This being in great part gaseous in form, permeates every part of the bed, mattress, blankets, as well as sheets, which soon become foul and need purification.

The mattress needs the renovation quite as much as the sheets. To allow the sheets to be used, without washing or changing, three or six months would be regarded as bad house-keeping; but I insist if a thin sheet can absorb enough of the excretion of the body to make it unfit for use in a few days, a thick mattress, which can absorb and retain a thousand times as much of these poisonous excretions, needs to be purified as often, certainly, as once in three months.

A sheet can be washed. A mattress cannot be renovated in this way. Indeed, there is no way of cleansing a mattress but by steaming it or picking it to pieces, and thus, in fragments, exposing it to the rays of the sun. As these processes are scarcely practicable, with any of the ordinary mattresses, I decidedly am of the opinion that the good

old-fashioned straw bed, which can every three months be changed for fresh straw, and the tick be washed, is the sweetest and most healthy of beds.

If, in the Winter season, the porousness of the straw beds makes it a little uncomfortable spread over it a comforter or two woolen blankets, which should be washed as often as every two weeks. With the arrangement, if you wash all the bed coverings as often as once in two weeks, you will have a delightful, healthy bed.

Now, if you leave the bed to air, with open window during the day, and not make up for the night before evening, you will have added greatly to the sweetness of your rest, and, in consequence, to the tone of your health.

I heartily wish the change could be everywhere introduced. Only those who have thus attended to this important matter can judge of the influence on the general health and spirits.—*Maine Farmer.*

Purifying the Blood.—Some persons actually read and believe the medical almanacs and advertisements of nostrums that flood the newspapers. How wisely they talk, these advertisements, about the necessity of purifying the blood; but they would lead the ignorant and credulous to think that the only way to get pure blood is to take doses of the particular kind of patent medicine advertised. Many respectable families take it for granted that some kind of spring medicine is necessary to set the human system in working order, as Winter's cold gives way before the approach of warm weather; whereas it is only necessary for them to "cease to do evil and learn to do well" in their daily eating, drinking, breathing, working and playing.

Persons who have learned and pay heed to the laws of health, find no necessity for spring medicines. They are all of the time purifying the blood by their simple daily habits. They aim to make their blood of good nourishing materials, and to "cleanse" it by pure air breathed into the lungs.

It seems to me more and more astonishing that the human body can stand so much abuse, especially in the way of bad air. People shut themselves into such close rooms in Winter, especially at night, that it is no wonder they are driven to all sorts of stimulants to whip up their flagging energies, and no wonder that they are "all run down" at the end of Winter. One of the most common mistakes is the supposition that air is pure in proportion to its coldness, so that you have only to open a door into an unheated room, which is itself a reservoir of foul air perhaps, in order to ventilate sufficiently the living room or sleeping room. But the mistakes in diet alone are sufficient to account for the biliousness that prevails in early Spring. A Winter diet made of fat pork or of hot pancakes saturated with butter or fat, will pretty surely bring some sort of sickness in its wake.—*American Agriculturist.*

Sunlight a Necessity.—Sun-baths cost nothing, and are the most refreshing, life-giving baths that one can take, whether sick or well. Every housekeeper knows the necessity of giving her woolens the benefit of the sun, from time to time, especially after a long absence of the sun. Many will think of the injury their clothes are liable to, from dampness, who will never reflect that an occasional exposure of their own bodies to the sunlight is necessary to their own health. The sun-baths cost nothing, and that is a misfortune, for people are still deluded with the idea that those things can only be good or useful which cost money. Let it not be forgotten that three of God's most beneficent gifts to man—three things the most necessary to good health—sunlight, fresh air, and water, are free to all; you can have them in abundance, without money and without price, if you will. If you would enjoy good health then see to it that you are supplied with pure air to breathe all the time; that you bathe for an hour or so in the sunlight; and that you quench you thirst with no other fluid than water.—*Journal of Health.*

At Lennoxtown, Scotland, a lady has died from lead poisoning. She used, by medical advice, the ordinary seltzer water in siphon bottles, and the water has taken from the siphon such a quantity of lead that it is supposed she received for many days at least a grain a day.

Domestic.

Practical Recipes.

BY MRS. M. E. THOMASSON.

SALT-RISING BREAD.

MANY persons are fond of salt-rising bread and would be glad, perhaps, to have a recipe that can always be relied on. For the benefit of such I send the following: As soon as the fire is made for the morning meal, put into a tin can or other vessel (I like tin best) one quart of warm water, one desert spoonful of salt and one of sugar; stir in enough wheat bran to thicken; place the vessel in a pot of warm water and set in a warm place to rise. The water should be kept quite hot, as a much greater degree of heat is necessary for this kind of yeast than for any commonly used. Be careful not to scald it. In about five hours, or when the bran has risen several inches, strain through a cloth, adding to the liquor salt and warm water sufficient to sponge the amount of flour desired for bread. Keep the sponge warm, and when light, knead and bake in the usual manner. I never use any other bread, and my neighbors often speak of "your good salt-rising."

OPENING FRUIT CANS.

I would like also to tell your readers my method of opening fruit cans, which is very simple and much better than the old plan of melting and gouging wax in order to remove the lids. Hold the can in the left hand, while with the right strike softly and quickly with the handle of a knife on the lid and around the top. The wax will fly off, leaving the can as clean almost as when new, causing no injury to the can and rendering no after cleaning necessary.

Eds. Agriculturist: I am very much interested in the "Domestic Department" of your paper, but am very much surprised how little interest is taken by the women in it. In going around to the farmers' houses, it is a constant source of surprise to me to see how inconvenient the kitchens are, and how much useless labor the farmers' wives and daughters do. Now, I will venture to say there is not five complete kitchens, in ranch houses, in Santa Clara county. And what is more, there is not one out of a hundred women that spend their lives doing house-work who knows how she wants a kitchen arranged to be convenient. There is as much difference in woman's work, between doing it easy and making hard work of it, as there is in a man's using a scythe or mowing machine. Why, even in putting in a sink, where they have one, it is left to the carpenter, so that instead of a low, long and wide sink, with a pitch to drain it promptly, the carpenter puts in a nice little thing, so high as to be inconvenient, and closed up beneath flush with the front, to prevent a person standing close to it as they had ought to to work easy, and so level that the water will be hours running off.

W. A. T.

Miscellaneous Recipes.—*Cream Cakes*—Stir a teaspoonful of salt into a pint of thick, sweet cream; sift in slowly a quart of flour; roll it an inch thick, cut it out with the top of a tumbler, and bake in an oven.

Vegetable Oysters—Put one quart of slicep oysters in two quarts of water, cook till very tender, then add salt, pepper and butter, and a half pint of sweet cream. Serve with crackers.

Rolls—Take a cnp of sweet cream, the white of three eggs beaten to a foam, a teaspoonful of salt rising, and a little salt; mix in a pound of sifted flour with warm milk enough to make a stiff dough. Set it in a warm place, and it will rise in an hour. Knead it into rolls, and bake on a floured tin in a quick oven for fifteen minutes.

Scrap Pudding—Put the scraps of bread, crust and crumb, into a bowl with sufficient milk to cover them well. Cover with a saucepan lid or plate, and put into the oven to soak for half an hour. Take it out and mash the bread with a fork until it is a pulp; then add a handful of raisins and as many currants, a teaspoonful of brown sugar, half a cup of milk, some candied lemon peel, and one egg. Stir it up well, grease a pudding dish, and pour the pudding in. Grate over a little nutmeg, put it into a moderate oven, and let it bake for an hour and a half.

Orange Sirup—Squeeze the juice from the oranges; to a pint of it put a pound of white sugar; set on a moderate fire. When the sugar dissolves put in the peel of the oranges and set the sirup where it will boil slowly eight or ten minutes; then strain. Do not squeeze while straining. Bottle and cork tight. Excellent eaten on almost any kind of a pudding. An excellent sirup can also be made from the peels and pits of peaches; also the peels and cores of those late little sour pears—some prefer half quince and half pear. Such odds and ends can be made use of, and when the wind and snows of Winter are blowing, these sirups are nice eaten on our buckwheat cakes, when otherwise, perhaps, we would be obliged to use black molasses.

Paragraphs Worth Remembering.—Benzine and common clay will clean marble.

Dieting will aid you in removing pimples.

Caster oil is an excellent thing to soften leather.

Spirits of ammonia, diluted a little, will cleanse the hair very thoroughly.

Lemon juice and glycerine will remove tan and freckles, and will cleanse and soften the hands.

Stains on wall paper can be cut out with a sharp penknife and a piece of paper so nicely inserted that no one can see the patch.

A good, cheap paint for floors is made of five pounds of French ocher, one quarter of a pound of glue, and a gallon of hot water. When well dried, apply one or two coats of linseed oil.

A case of death by green wall-paper poisoning has occurred in Louisville, and examination showed that the paper on the wall of deceased's bed-chamber contained two grains of arsenic to the square foot.

Tobacco and Bread.—Bishop Janes stated at the Round Lake camp meeting, last Summer, that it costs the Methodist church more for tobacco than for religion.

The statistics of the Government show that tobacco costs the nation many millions more than its bread does.

Would it not be a sad thing if the heathen, for whose salvation we are contributing men and money, should learn these facts?

Shall those who in some measure realize the greatness of this evil, and are laboring to prevent our young people from being led into its wretched slavery, by the example of church members and ministers, be frowned down by men who are joined to their idols and either cannot or will not reform?

To Soften Old Putty.—A recent writer in *The Garden* says: After many trials, and with a variety of differently shaped tools, with various successes, I at last accomplished my end by the simple application of heat. My first experiment was with a soldering iron, when, to my great delight, I found the putty became so soft that the broken glass could be removed by the fingers, and the putty be easily scraped away. All that is required is a block of iron about two and a half inches square, flat at the bottom, drawn out for a handle, with a wooden end like a soldering-iron. When hot, not red, place this iron against the putty, or flat on the broken glass, if sny, and pass it slowly round the sides of the square. The heat will so soften the putty that it will come away from the wood without difficulty.

Medical Properties of Eggs.—The white of an egg has proved of late the most efficacious remedy for burns. Seven or eight successive applications of this substance soothe pain, and effectually exclude the burn from the sir. This simple remedy seems to be preferable to collodion or even cotton. Extraordinary stories are told of the healing properties of a new oil which is easily made from the yelk of hen's eggs. The eggs are first boiled hard, and the yelks are then removed, crushed and placed over a fire, where they are carefully stirred until the whole substance is just on the pount of catching fire, when the oil separates and may be poured off. One yelk will yield nearly two teaspoonfuls of oil. It is in general use among the colonists of South Russia as a means of curing cuts, bruises and scratches.

The Dairy.

Nervous Cows.

No observing person can have the care of a herd of cows long without noting a great difference in the character and disposition of the different animals. In fact, as Mrs. Partington observed about folks, there is as much difference in cows as there is in anybody, and the feminine peculiarities that we are apt to note in our own kind, may many of them be detected among the domestic animals. Some cows are so phlegmatic and good natured that a moderate amount of ill-treatment does not seem to disturb their equaniuity. Others are naturally vicious, and will kick and hook without provocation, from "pure cussedness." There is another class that, while not vicious, are so nervous that they may easily be made to spear ugly, and in time become really so, in consequence of rough handling or carelessness. It requires a considerate and good dispositioned man to manage such cows and get along with them. They must be humored, spoken kindly to, and gently handled in milking. Swearing at them, or beating them, demoralizes them fearfully, and makes them almost useless in a short time. It is often among the very best milkers and butter makers that these nervous animals are found, and we cannot afford to have their value thus impaired. No violence should be allowed among the cows at any time, but if you have impatient help, or are quick tempered yourself, let some person who don't get mad so easily milk the nervous cows.

Creamery Averages.—The average number of pounds of milk to a pound of butter and to a pound of cheese at the Aville Creamery, Ellington, N. Y., for 1873, was: For butter, 38.056 lbs of milk to one pound of butter, and 12.025 lbs of milk to one of cheese. The net value of a pound of milk was 1.4128 cents.

The habit of being always industriously employed is a great safeguard through life, as well as essential to the cultivation of every virtue.

Apiary.

Most Practicable Bee Hives.

At the Northeastern Bee Keepers' Association, held at Utica, New York, last February, Mr. R. Bacon gave his experience as follows:

It is with hives very much as with mowing machines; the farmer often viewing and reviewing the different machines is puzzled to determine which is the best, yet, no doubt, some are preferable to others. So it is with hives. We see in market tall hives. short hives, narrow hives, wide hives and box hives, one story hives, two story hives, bar hives, and many other hives, and men ready to show you the good qualities of one hive over the other, and when you have gone the rounds, if you have had no practical experience in bee culture or have no judgment of your own, you may be led to believe the poorest hive the best. I would advise the beginner in bee-keeping to use discretion in this matter and take the middle ground. He should choose hives containing frames of convenient size, and safe to handle, for general use. They should not be complicated or costly; they should be capable of construction by any man who is handy with tools. The bee-keeper who does not depend on his hives for support may lay out money for costly and fanciful hives; but the majority of bee-keepers want a cheap, practical hive. I have had rough, cheap hives, and elegant, costly hives, and I have found fn every case, all things being equal, bees have done full as well in my rough hives as in the more costly onces. The wants of bees are few, and they are not partial to fancy hives, and all vsriations from their wants are to benefit or gratify the taste of man. Give the bees a proper shaped hive, and sufficient amount of room in the hive, and good care, and they will give ample returns. Now, there has been much said and written on what constitutes a proper size and shaped hive. Some contend a hive should be large. Others say twelve inches square is the proper dimensions for a standard hive. Now, my experience with large hives has been anything but satisfactory; they neither give new swarms nor a lsrge amount of surplus honey. Of course I speak of working these hives for box honey. I think an extractor would show better results, but my experience in the other extreme of hive has been no better. A hive twelve inches square is too small for bees in any place. The swarms from such hives will be small and generally inferior compared witn swarms from larger hives. There is but little room for surplus bees, and therefore not a very large amount of honey can be expected, and with the best of care in two or three years, the bees will be gone. Between these two extremes, I believe is found the correct medium. A hive sixteen inches long, twelve inches wide and twelve inches deep, and frames to fit, and have it so constructed that side boxes or extractor can be used, if the season requires it, comes nearer to what I think is the hive for general use. The frames are of convenient size, and safe to handle for either extracting or other uses. I believe it is often the case that localities cause very much contention about the style of hive and the management of bees, and were we to consider from each other's standpoint, and reason accordingly, it would save many jangles in bee culture. My frames fit a sixteen-inch hive and are not more thay fourteen inches long and less than a foot deep. They hold the comb perfectly and have no difficulty in breaking down.

Buckwheat for Bee Pasturage. — The right time to sow buckwheat for bee pasturage, in California, is from May to July. When the soil cannot be irrigated, sow in May. If sown then, it not only forms the best pasturage for the bees, but usually yields a good crop of seed. It is one of our best honey-producing plants. The proper quantity to sow to an acre is one peck, although some prefer to sow two pecks. I raise it largely, and succeed best by sowing only one peck to the acre. The number of acres required for thirty colonies of bees will be about four, if it is a good season for secreting honey. I have known one acre of buckwheat to furnish food enough for bees so that 800 pounds of honey and 85 bushels of grain were made from it. This was, however, an unusually favorable season. Five acres are the least that should be sown for the number of colonies mentioned, as it is better to have "too much than not enough."—*Ex.*

The Profits of Farming.

The farmer who resides within reach of a good market, where everything he can produce will command a ready sale at fair prices, and where nothing goes to waste, has a decided advantage over the farmer who lives farther from market and depends upon such staple articles of produce as grain, stock, etc. The perishable articles which he cannot handle yield the largest profits. The advantages of a good home market are well illustrated by the following table, taken from the last volume of the Agricultural Report, just issued. It shows the average cash value of farm products per acre in each State and in the Territories:

States.	Average value per acre.	States.	Average value per acre.
Maine	$14 16	Texas	$12 84
New Hampshire	19 50	Arkansas	17 60
Vermont	17 87	Tennessee	20 70
Massachusetts	31 10	West Virginia	15 04
Rhode Island	34 00	Kentucky	15 54
Connecticut	39 94	Ohio	14 57
New York	22 94	Michigan	15 65
New Jersey	27 96	Indiana	13 51
Pennsylvania	20 80	Illinois	11 13
Delaware	13 24	Wisconsin	14 18
Maryland	15 52	Minnesota	11 38
Virginia	14 15	Iowa	8 49
North Carolina	11 98	Missouri	11 99
South Carolina	10 45	Kansas	8 92
Georgia	11 68	Nebraska	7 74
Florida	11 47	California	15 10
Alabama	13 78	Oregon	16 70
Mississippi	15 61	Nevada	44 30
Louisiana	15 61	The Territories	26 10

The Eastern States, which are not half as productive as those at the West, yield double the returns, in cash, to the farmer; Nevada and the Western Territories, not producing the supply equal to home demand, pay the farmer from two to five prices for all he can rsise, which makes his business profitable. the value of the land must be determined, therefore, not so much by its productive qualities as by its market facilities. The farmer who can get as much money out of ten acres of ground, with half the labor, as can be obtained by his brother from twenty acres, can afford to pay very much for his ten acres. The saving of one-half the labor is not for one year only, but it is a perpetual advantage. The farmer, therefore, who goes far away from market, in order to get cheap lands, will discover that the purchase price of lands should not be considered so much as the market facilities.—*Rural Sun.*

Cribbing in Horses.—"Dr. Cook, of Elmira, Ohio, writes the *Scientific American* that cribbing is caused, in the first instance, either by the front teeth growing so close together as to press and give pain, or by something getting between them, acting as a wedge. The horse feels relief by pulling with his teeth on any hard substance like the side of a plank. Dr. Cook saws between the teeth with a very thin saw, which removes the pressure and cures a bad habit."

The ghost of Noah Webster came to a spiritual medium in Alabama, not long since, and wrote on a slip of paper: 'It is tite times.' Noah was right, but we were sorry to see he has gone back on his dictionary.

Stock Breeder.

Keep Pure Breeds.

MANY farmers make a great mistake by always being anxious to change or cross their breeds. If they would first determine what they consider to be the best breed of cattle or horses, sheep or swine, and then make every movement in improving and perfecting that breed and keeping it in the highest state of purity—it would be far better. Every farmer knows whether he keeps cattle for beef or butter or cheese. If for beef—if that is the main object—the Short-horn is unsurpassed. If beef is the main object and milk a secondry object, still the Short-horn stands first, and every effort should be made to keep it pure, and to improve it, for the purposes for which it is kept. If a high quality of butter is wanted—if this is the main object—Jersey butter commands the highest price in market; and Jersey cows will make more on the same feed than any other breed. The Jersey, then, should be bred pure, and be improved instead of crossing other breeds upon it. The Devon makes good butter and beef, though small for beef purposes; but in hilly countries, where a great deal of travelling is done to obtain subsistence, and where there is considerable exposure, and especially for working cattle also—the Devon stand high. The man who has the Devons should keep them pure, and allow no other crosses. The Ayrshires are highly recommended for cheese purposes. Farmers keeping any of these breeds should get them pure as soon as possible, and keep them so.

The same may be said of all kinds of stock. If you have Berkshire swine don't cross other breeds on them, but obtain pure, fresh blood to them. When you buy, let it be more Berkshires, if you like that breed; and none seems to be healthier, hardier, better grazers, or coming up nearer to the wants of the farmer. If you have the Poland-China, and are pleased with as large a hog as this, and if you are in a fine corn country, you should not cross another breed on them, but buy more of the best breeding stock, to keep fresh blood in it. The same may be said of poultry. Instead of keeping two or three or half a dozen varieties of poultry, keep one, and keep it pure, and try to have the best of anybody. It is always disadvantageous to be obliged to shut up poultry in yards. They want exercise, fresh air, a variety of food. They can secure those better, if allowed to go whithersoever they choose, than to be shut up in close yards.

One of the advantages in keeping stock pure is, you can sell it for five times as much, when kept pure, as you can, if constantly crossing, so you can't tell what you have got. This is the course breeders are pursuing, and one farmer can become a breeder of pure fine stock, as well as another. It is admitted that skillful breeders are making money. Let every reader become a skillful breeder of some kind of stock. It is no more trouble than to be always crossing. Aim at excellence as a breeder, and you can reach it with the proper effort.—*Rural World.*

The above advice is correct inasmuch as it applies to the breeding of pure stock of any kind. But while it pays to breed pure stock alone, it also pays to mix pure blood with common stock and grade it up as fast as possible.

Here is another definition of a thoroughbred, which is worthy of remembering. "A thoroughbred animal is the offspring of a dam and sire, each of five uncontaminated crosses, and a half-thoroughbred must have a dam or sire that is full thoroughbred. A full blood animal is one of which the sire and dam have each uncontaminated blood of the same strain."

To Fatten Cattle.—We clip the following, by R. A. Steele, a prominent stock raiser of Kansas, from the *Drover's Journal.* If stock raisers could and would be guided by it, the quality of cattle sent to market would be rapidly changed:

The price of cattle fattened for market depends on the symmetry of the animal, as well as the fat style, as shippers term it. I want here to state that good blood is important, but not absolutely necessary to make what is termed a good seller. In order to fatten a steer to bring the highest market price, he must be kept in a growing condition from a calf, and in no case allowed to go hungry. It is the starving the first and second years that wilts and shrivels up a steer, that causes him to be sold at a reduced price. No amount of feeding will make him a first class seller, no difference what his color or blood. An animal well fed (I care not what the blood—Texas or not) from a calf until he is three years old, will be smooth, with bones well covered, and will sell at a profit; while a half starved animal becomes crooked in the back, bones projecting and shriveled up, takes the best part of the Summer to get in a condition to live, and will not be in a condition for market until he is four years old, and then will bring a price which is unsatisfactory to the producer, and to every one that handles him. This is no theory, but a fact, deduced from close observation, as I have tested the plan for several years.

It will, and does pay to feed corn to calves and yearlings. They start out on grass in the Spring strong and vigorous. You are then able to market your cattle the Spring they are three years old, weighing 1,400 pounds, which is heavy enough to bring the first price. The best steer I sold in 1872 was a common native. He had all he could eat from a calf, and was never hungry. He was a handsome animal, and worth more per pound than anything I shipped in 1872. He weighed in Chicago 1,350 pounds; age, three years. I have a steer calf eleven months old, from a very ordinary cow. The calf in May weighed 660 pounds. I think it will weigh, when three years old, 1,500 pounds. I do not wish it understood that I am not in favor of improving the blood as well as feed.

I shipped two Texas steers this Spring, which were three years old. They were smooth and nice, and I sold them with a lot of Durhams four years old at the same price, and they were worth as much per pound and weighed better according to age. They were raised and fed by different parties.

Mammoth, overgrown steers have had their day, and we now come down to the neat, compact, well fattened animal, both in hogs and cattle. To accomplish this in cattle, good feeding from a calf is necessary.

Dogs and Sheep.—One might ask, why don't you kill off the dogs? The reason is a simple one; a farmer's dog often saves him his crop. Dogs have been used so much for the protection of grain from stock that especially in the past they have seemed indispensable. As a solution of this question, however, an exchange suggests the following: It is a well established fact that bells on a flock of sheep is a preventive against the ravages of dogs. A half-dozen or dozen small, clear-toned bells to fifty sheep would be sufficient. Added, kill every dog suspected of depredating upon them.

Scrub Stock.—"What is 'scrub stock?'" asks a correspondent of the *Rural New Yorker.* Whether this question is asked in good faith or not—whether it is sent in "just to see what we will say," or not, we propose to answer it: and our answer is that it is any kind of stock which does not pay maximum profits for keeping and feeding. In other words it is that kind of stock which is not *the best* for the purpose for which it is kept.

Stock Pays All the Time.—The heading of this article, says the *Valley Farmer,* was the remark of an old farmer the other day, while deploring the failure of his wheat crop. "One year the wheat fails, another year the corn; but," says he, "stock pays all the time." He, moreover, remarked that the farmers who early gave their attention to stock raising, had gone right along without setbacks, and had outstripped the grain growers.

There is, no doubt, much truth in the old man's remarks. Stock is the surest and most remunerative. But in thickly settled regions it is better and safer to divide the interest between the two. The two assist each other and improve the farm. Waste straw and offal of the stock go far in fertilizing the soil and improving its capacity for productiveness. The strength of the soil is a great desideratum with the farmer. The soil is the mine of wealth—his treasury—his bank of deposit. He must keep it good, or his paper is protested; his reputation as a farmer is dishonored.

It is well to keep a variety of stock as well as to raise a variety of grain crops. The general profits of each year are thus kept nearly equal. Farming may be done closer, less wasted and more made.

In Southwestern Texas, there is a cattle raiser who has lived there twenty years. On going there he picked up a dozen cows and branded them. He had no land, but was the possessor of a wife, two or three children, and a few dogs and two or three horses. He kept watch on his cows and lived in a hand-to-mouth way several years, sustaining his family by the capture of game and the sale of skins. In May, 1873, he owned 30,000 head of cattle, duly branded, and ranging over the plains. He has a family of nine children, five of whom are boys.

His eldest child is a girl, nineteen years of age. She can rope a steer, kill a wolf with a rifle, or untangle a dog at arm's length. As the man's house is a nail keg, nearly filled with gold coins, while in the pantry is a flour barrel almost filled with silver pieces. When he sells cattle it is for coin which is dumped on the premises. He will not take paper money at any rate, but is always ready to sell steers for gold or silver. The house occupied by this prosperous family is low, built of logs and contains three rooms. The father and mother sleep in the dining-room, the girl sleeps in the spare room, while the boys sleep in the addition.

Those who are giving their attention to the breeding of pure blooded Norman Percheron horses are on the road to wealth. Perhaps no subject has been spoken of so often as the matter of choice of animals for breeding purposes. At the same time there is no doubt but that the mass of our farmers to-day are heedless of this important matter. Why is it that the cry is made to-day that there is no money in raising horses? Simply because our farmers do not accept as a fact that "blood will tell" and that it costs but a trifle more to raise a horse that will be worth from $200 to $400 when he is four years old than one that it is hard work to sell for $75. —*Fine Stock Gazette.*

Says the *Fine Stock Gazette:* Ponder over this showing, you wheat-growers who have mortgaged your farms for machinery. Four thousand seven hundred and fifty hogs, weighing 1,440,400 pounds, were shipped from Iowa City, Iowa, during the month of January, averaging $6 30 per cwt. Thus a nice little $84,445 is brought right into one community in cash, and of course cannot fail to put that community, financially, in much better circumstances than its neighbors who have had no faith in swine-growing.

When an animal has been grown upon correct principles, it is at all times merchantable, and the addition of flesh to almost any required amount is very simple.

The Horse.

Breeding Horses for Use.

PROBABLY there is less money made by raising horses for sale than in any other stock. It is only occasionally that a young horse will bring enough when sold to pay for raising him. We do not advise horse-breeding as a money-making business, but only for use. It does pay a farmer who has use for horses to keep at least one span of mares of such breed as suits him to raise colts from. The mares can do just about as much work during the year as they ordinarily would if they did not raise colts. There are seasons when they would be at rest, and a sensible farmer will so manage that the colts will be foaled at a time when it will least interfere with the usefulness of the mares for work.

Occasionally, a man can make something by raising fine trotting or running stock, but seldom indeed; and on an average there is more time and money spent fooling with such "fine stock" than they are all worth put together, even at their fictitious values.

That the most useful horse is the most valuable one from a common sense stand-point of values, there is no disputing. The farmer who tries to improve his working and road stock is on the right track, whether he pleases the jockeys or not.

And right here we want to call attention to the superiority of good walking horses over those of slower gait. Everything else being equal, fast walkers are worth twice as much as slow walkers, for farm work especially, and for any kind of teaming.

HARDY COLTS THE BEST.—Good care of colts does not mean keeping them in the stable, unless it be during storms. A colt can be made tender and awkward if it does not have the full benefit of out-of-door exercise and romping over fields and pastures. Good feeding is a necessity to rapid growth and and complete development, but without that exposure and freedom that gives hardiness and nimbleness a colt cannot become a perfect horse. Don't make the colts tender and dumpish by confinement when they are growing. Give them a chance in the full air and sunlight, and inure them to some endurance of fatigue and change of weather. But feed them well and train them in the way they should go.

PERCHERON AND NORMAN HORSES.—Within the past few years quite a large number of stallions of these breeds have been brought to this country. The preference of most of our breeders is given to them decidedly over the Clydesdales, and they are used with grand success upon mares of all breeds and sizes. Even the little Indian Pony mares will bear a great Percheron stallion's foals, which, as yearlings, are as large, or larger, than themselves, and it is abundantly proved that size is not an essential qualification in mares to produce large colts by these horses, contrary as this is to the views which prevailed a few years ago, namely, that the best system of breeding was to put big, roomy mares to well-knit and compact stallions smaller than themselves.

The demand in all our large cities now for heavy, quick-stepping draft horses, a pair of which will step off with five tons over a good pavement, is so great that our farmers must be awake to meet it. Such teams will bring $800 to $1,200. They ought not to be put to hard labor before they are five or six years old; but from the time they are three until they are old will do all the farm work and not feel it.

As this style of horses increases in the country, the desirability of keeping the mares for breeding, will lead to our using heavier teams for farm work which will be greatly to our advantage.—*Ex.*

ENDURANCE OF EASTERN HORSES.—Australian horses, unprepared, unshod, and uncared for, are in the constant habit of performing forty, fifty, or even sixty miles a day, when on a journey over roads or through the wild native bush, without even a track. Their food consists of what they can pick up for themselves, in many cases when tethered to prevent their straying, and their grooming in having the rough mud rubbed off with a bunch of grass; but they have at least one advantage over poor *Caradoc* in being allowed to ease and rest their limbs in whatever manner they choose during the night. It is stated, on the authority of Abdel-Kader, that Arab horses will travel for three or four months at the rate of over fifty miles a day without showing fatigue, and are capable of doing 150 miles in a single day during the journey, if treated with care and quietly ridden the next. Some years ago, an Arab, only fourteen hands, one inch high, was ridden in India 400 miles in five days for a bet; and its owner offered to repeat the feat after one day's rest. This offer, however, was not accepted, as the game little horse won the match the first time with the greatest ease.—*Land and Water.*

A Public sale of Percheron horses took place at Onarga, Ill., February 10th. An average of $2,055 each on the ten young stallions disposed of was obtained.

Pisciculture.

How Fish Spawn Can be Hatched.

AMONG the many interesting things at the exhibition of the Central New York Poultry Association lately was a new contrivance for carrying and hatching fish eggs, the invention of A. Green, brother of Seth Green, the famous Father of Fishes. It was a plain compact box, not over fourteen inches square, which contained trays about one inch in thickness, placed snugly one over the other, and filling the box completely full. The bottoms and tops of the trays were composed of Canton flannel, and the cost of the whole is but a trifle. The fish eggs are placed upon the flannel, one layer in each tray, and it is only necessary to keep the flannel moist to secure the desired result. The eggs can be hatched in fifty days or in one hundred and fifty, just as the owner desires, the length of time necessary being governed entirely by the temperature of the place in which the hatching box is kept. If the flannel is kept slightly moist, the process of hatching goes on, whether the box is located in kitchen, cellar, pantry, garret or parlor, just the same as if the eggs were in a hatching house, creek or river. When the eggs show signs of life, the trays can be put into a pan, those that are wiggling upon their own account can be brushed off into the water or allowed to paddle away, and the remainder can be replaced in the box and hung upon a nail until evidences of other lives appear. Several of the trays were in the pans at the poultry exhibition, and the visitors were greatly interested in seeing the young fish break out of their eggs and swim off with the sacks which give them nourishment for thirty days and longer.

HOW OYSTERS ARE BORN.—Prof. Lockwood, in *Popular Science Monthly*, says: Our bivalve, however, does not spawn after the manner of mollusks generally. It is in its own way viviparous. It does not emit eggs; but, at the proper time, sends forth its young alive. The eggs are dislodged from the ovaries, and committed to the nursing care of the gill and mantel. At first, each egg seems to be inclosed in a capsule. It is of a yellowish color; but, as incubation or development progresses, this color changes, first to a gray, then to a brown, afterward to a violet. This is a sign that the time of eviction is at hand; for Nature now issues her writ to that effect. And wonderful little beings they are when the writ arrives to vacate the homestead; for whole troops of them can go gracefully, and without jostling, through the maziest evolutions in that tiniest sphere—a drop of water.

As cited by F. W. Fellowes, in the *American Naturalist*, says M. Davaine: "Nothing is more curious than to see, under the microscope, these little mollusks travel in a drop of water, in vast numbers, mutually avoiding one another, crossing each other's track in every direction, with a wonderful rapidity, never touching, and never meeting." The parent oyster has, indeed, a prodigious family to turn out upon the world. But when this time does come, though Winter be near, her actions are summary, and the wee bairns are every one ordered from home. They are spit forth, or ejected from the shell. Filled with water, the valves are suddenly snapped together. Every snap emits a small, whitish cloud. Though a little of the milky fluid be in it, this whitish cloud is composed chiefly of the tiny fry; for, individually, they are almost invisible. Indeed, who shall count the oyster's offspring? Science, by her own methods, has made the computation, and so she gives us the astounding assurance that a single oyster, during one spawning season, emits two million embryos!

Seth says he has been experimenting upon this process since 1855, but never hatched spawn to his satisfaction. While he has been busy in taking care of the general improvements in the matter of fish culture with great success and much benefit to the world at large his brother worked out the problem, and Seth gives him all the credit due his invention, for which a patent has been asked. The Greens find that they can hatch 1,000,000 fish eggs by the use of a single pail of water. Brook trout, salmon trout, white fish and salmon all grow finely in the box. They have carried 100,000 salmon trout from the New York State hatching house to the Pennsylvania house on two trips. In one trip seventeen were found dead, while but two died on the other. Spawn can be carried on a journey of 130 days with good management, and no more loss than is sustained in the hatching house. This appears to be the invention necessary for transporting the spawn across the ocean to Europe. With it there could be no failure like the one which occurred recently upon the first trial trip.—*Utica Herald.*

TROUT AND WHITE FISH.—B. B. Redding, of the Fish Commissioners, and J. G. Woodbury, their Superintendent, took to the Summit from Berkeley 15,000 young brook trout, half of which were to be planted in the North Fork of the American river, at Soda Spring, and the remainder in Prosser creek, which empties into the Truckee. These trout constitute one-third of the number hatched at the State hatching establishment at Berkeley from 50,000 eggs from New Hampshire. The rest have been placed in streams in different portions of the State. One hundred thousand white fish eggs arrived a few days ago from the Government hatching establishment at Niles, Michigan, but a large number had hatched out while *en route* and died. The young fish obtained from the eggs remaining will be introduced into Tulare lake. A large number of white fish were planted in Clear lake two or three years ago.—*Record-Union*

Seth Green and His Work.—The name of Seth Green will always be an honored one on this coast; and the Isaac Waltons of California will cause it to be revered and esteemed among their children. Although many may have created more agitation and acquired more notoriety, yet few have accomplished such substantial and enduring good as Mr. Green. The results of his labors will last forever, and their benefits extend and multiply with time. Mr. Green has recently read an address before the National Fish Culturists' Association of New York on fish culture, which is replete with useful suggestions on the subject to which he has devoted so profitable a life. He speaks of the things which can be accomplished in the matter of fish transplantation, and says of New York that all its used-up shad rivers can be stocked again and made as productive as in their best days. Mr. Green relates an entertaining experience of how he was in Washington in 1868, and hatched a few shad in the office of General Spinner—he of the wonderfully and fearfully made autograph. He told the General that with twenty-five thousand dollars he could stock the Potomac with young shad, and in three years they would be as plentiful as ever before. And the honest and plain old Cerberus of the Treasury tried to get members to vote the appropriation; and when the plan fell through was one of the "maddest men" around the Capitol.

The speaker alluded to the discouragement he had met with when he "went to the Connecticut and Hudson rivers and told the people he was going to hatch shad eggs, and make shad plenty and cheap." Everybody hooted at him. Some thought he was a rogue, while others, more charitably tempered, thought he was only a lunatic.

Mr. Green, in conclusion, lays down the very sensible proposition that the work of fish planting "should be kept out of politics." That when fish commissioners have acquired by experience a knowledge of the business, it is a great mistake to remove them and fill their places with new hands. And finally, he urges, "the State appropriation should be made so small that it will not be worth while for any shark to go for it."—*Vallejo Chronicle.*

The California Fish Commissioners, says the Alameda *Encinal*, have established a fish-hatching institution at Berkeley, on what is known as Strawberry Creek, especially for the benefit and edification of the students of the University, where they may learn the habits of the finny tribe free of cost. The hatching house is under the supervision of Mr. Woodbury. The ova of 60,000 brook trout was placed in the hatchery about six weeks ago. Of these, some 50,000 have already been hatched, and 12,000 placed in Alameda Creek, and branches, 3,000 in the Maraguna Creek, and branches, and the balance distributed in the northern waters of the State. The Commissioners are now importing the ova of the white fish in large quantities, through Professor Baird, President of the United States Board of Fish Commissioners. Soon the State of California will rival the most favored fish country in the world. Every new variety seems to thrive in our waters.

The jute cloth which enters so largely into the manufacture of grain bags in this country —especially in California—is mostly made at Dundee, Scotland, where there are 59 immense mills, one of which employs five thousand workmen, engaged in the manufacture. It is estimated that ten per cent. of the value of the California wheat crop is expended in the purchase of coarse jute, cotton and linen bags.

The gentleman who asserted that his friend never opened his mouth without putting his foot in it, being called upon to apologize, said he was very sorry, but when he made the assertion he did not know the size of his friend's foot.

Poultry Yard.

Brown Leghorns.

THERE is no denying the fact that the Brown Leghorns are fast becoming a most popular variety, both as a fancy and a useful breed. They are small, mature quickly, the hens come into laying early, and for that reason are profitable. They are easy keepers, being small feeders and prolific egg-producers. They have all the markings and build of good layers, having large combs and wattles, of a beautiful pinkred color, which is always suggestive of fresh-laid eggs. New beginners are apt to be discouraged at first, but experience teaches the virtue of patience and perseverance. I have learned that one must first raise his layers from good stock before he can expect even a moderate return, and fowls purchased from noted breeders are not always reared with an eye to this important advantage. It is sufficient for them that the breed has a name for producing eggs. Fowls for this purpose must be raised, not made—must have the very best of care and feed, from the shell up, to establish the foundation of a strong, vigorous constitution, in order to support rapid and long continued production, as well as to reproduce stamina in their young. I have every reason to believe the Brown Leghorns will do this and amply repay their own with a good supply of large, fine eggs at all seasons of the year; but there must be a large outlay before expecting a return. The chicks of the Brown Leghorn are hardy—as much so as any variety. The chicks require a certain amount of care until they are six or eight weed old, and by experience I find this rule to hold good with all breeds and varieties of poultry when in an artificial condition. The Brown Leghorn chicks possess the virtue of feathering early, and thus escape much danger which awaits their featherless brethren, the Black Spanish and Asiatics. The markings of both the Brown Leghorn cock and hen are beautiful—indeed, splendid plumage is a marked characteristic of the breed.

The day is long since past when the questions "Do hens pay?" "Are they profitable?" are undecided. I have had many years' experience, and can answer that I know they do. From the long list of debits and credits, I find the balance in their favor. The hen business (if the expression be allowable) is healthy, pleasant and lucrative; but one must in some measure be born to it (not made), with a fondness and interest in nature, a close, observing eye, and a mind willing to inquire into and search the mysteries of nature in her own fields, and learn the truth of the unmistakable knowledge she teaches her children; and where pleasure is born, the money value ceases to exist, and the profit accrues; thus labor becomes only a healthful exercise. To one about establishing a poultry yard, I would advise them to put down the Brown Leghorns on the list as a good variety, not only for their useful qualifications, but for beauty and ornament.—*Country Gentleman.*

Dark Brahmas.—Much has been said lately about this useful and popular fowl. My opinion is that there is not a more thoroughly useful fowl in existence. As a proof of what I state, allow me to make a few remarks.

A friend of mine who is quite well known as a Brahma breeder, has this year reared sixty-one chickens. The first brood consisted of eleven, from eleven eggs, turning out to be six cockerels and five pullets; this lot of chicks were sixteen weeks old on May 31, and on that day a pair (cockerel and pullet) weighed exactly eleven pounds. Three of the five pullets commenced laying at fifteen weeks old, and laid nine eggs during the last week. These two facts are quite sufficient to prove the qualities of the Brahmas, not only as a rapidly growing bird, but also as a good layer. Some of your readers, perhaps, may say, "Ah! but this is only a solitary instance." In answer to that I state the following: The same breeder's birds in 1871 commenced laying at seventeen weeks old. In 1872 the pullets commenced laying at sixteen weeks, and this year a week in advance. The gentleman to whom I allude is Mr. W. Mansfield, of Cambridge, and I have no doubt that the forward condition of his birds is simply due to the high feeding and good attention which they receive at his hands.

A few more remarks and I have done. No man can breed good fowls without care and trouble, but to be really successful he must have a knowledge of the habits and wants of the varieties he cultivates, which takes a long time to acquire. I have bred different varieties, but have found the Brahmas equal, if not superior, to all.—*Cor. London Field.*

I would like to give your readers a little of my experience in the matter of raising poultry hoping thereby to give some useful hints. I began with the Brahmas, and for market find them and others of the Asiatic breeds the best. But for egg-producers give me the Leghorns. I find their eggs, from their size and color, attract buyers much more readily than the darker and smaller eggs of the other varieties.

To the general farmer, I recommend a cross of the White Leghorn and Light Brahmin or White Cochin.

I give my fowls, for feed, a mixture of wheat bran, ground oats, and cornmeal, scalded, three times a day, and occasionally mix it with bone dust.

I now have about 1,500 chickens on my farm a few miles from the city. I have finally settled on two breeds, the Brahmas and the Leghorns. I divide my chickens into three lots, having a shed for each division. I do this because I think they are less liable to disease. As a proof of this I can say I never had a chicken die of the cholera.—"*Reader,*" *in Prairie Farmer.*

Cocks' Combs as Food.—The combs of Spanish and Leghorns fowls are sold in some parts of Europe as choice delicacies for the palates of those who sigh for fresh appetizers. Under the name of "Cretes de Coq," a supply of these morsels has been recently imported hither from Paris. The combs are of large size, both single and rose, and are put up in white vinegar, in long tubular glass bottles, holding about a pint, sealed with black wax. When we say that these small bottles cost at wholesale in Paris more than a dollar in gold each, the reflection is forced that many a large combed rooster may in future be sacrificed to Mammon, as many were offered up to Esculapius There are enough large combs in the yards of some of our breeders to make a fortune if they could be utilized. We hope, however, the combs on the Mediterranean class will be reduced in size, as many large ones amount to positive deformity.—*Poultry World.*

Guinea Fowls for the Table.—The Guinea fowl is the richest and most palatable of all our domestic poultry. We can remember of no game bird among the Gallinæ that surpasses it, and when our grouse and partridges and prairie chickens become extinct, as they will by-and-by, the Guinea fowl will prove a perfect substitute for them, and as it breeds freely and requires but little care, it will be practicable to breed it in all sections. After the bird attains an age of two years it needs some other process of cooking than by roasting, but with an age of less than two years, a roasted Guinea fowl will discount anything else in the edible line we can raise.

In Sweden, gardening forms a part of the educational system. Upwards of 2000 schools have gardens for planting attached to them, and the teachers of elementary schools are obliged to learn gardening.

Porcine.

How to Tell the Age of Pigs.

IT the various exhibitions of stock, where care is taken to test the correctness of the certificate of age by an examination of the teeth, pigs occupy a somewhat invidious position, inasmuch as they are always suspected animals. Disqualifications on account of the discrepancies between the state of the dentition and the age stated by the exhibitor are of constant occurrence, and outsiders are compelled to conclude either that the dentition of pigs is very irregular, or that those who have charge of the animals are singularly inexact in their reckoning. Certainly, the pig is not to blame, for the changes which take place from birth to the completion of permanent dentition at eighteen months are remarkable for their regularity. Comparing the statements of the older writers on the subject of dentition of the pig with the facts which have been recently noted we may conclude that an improved system of breeding and feeding has had great influence in advancing the development of the teeth; but whatever was gained in this particular reached its culminating point years ago, and for some time past we have noticed that the exceptional cases have been in the direction of retarded rather than premature development of the teeth.

At birth the pig has the temporary tusks and the corner incisors well up. These teeth are very fine and sharp, almost like fine needles, and occupy a position on each side the mouth, leaving a clear space in front. In a month to six weeks the central temporaries are cut, and soon after the completion of the second month the latteral incisors are cut, and the animal has its full set or temporary teeth, including three molars on each side, top and bottom, six incisors, top and bottom, and a tusk on each side, top and bottom. At the age of six months the premolars, which occupy a position between the first temporary molar and the tusk, are cut, and also a permanent molar, which is fourth in situation. The premolars are not always present, and in their absence the fourth molar will be accepted as an indication of the age of six months. At nine months the permanent tusks are cut, and the corner permanent incisors, which often prick through the gum soon after seven months, are fairly up. At one year old the central permanent incisors take the place of the temporary teeth, and the fifth molar is also in position.

Many pigs at the age of twelve months retain the temporary central incisors, and we have met with no instances of the permanent centrals being in their place before the full age of a year; hence the fact of these teeth being well up in an animal which was certified to be under one year, would disqualify it. At fifteen months the three anterior molars are permanent, and they may be easily recognized by their recent appearance, and by the absence of any signs of wear. At eighteen months the permanent dentition of the pig is completed by the cutting of the last molar, and also the external permanent incisors.

After this period it is seldom necessary to define the age of the pig, nor is the evidence which is afforded by the growth and wear of the teeth sufficiently exact to enable the examiner to form a positive opinion.—*London Agricultural Gazette.*

The Berkshires.—David Z. Evans, Jr., thus speaks of this breed in the *Live Stock Journal:* The Berkshire breed of swine is much esteemed, and deservedly so, for its many good qualities. One of its chief recommendations is its freedom from most diseases, particularly skin diseases, such as mange, etc. With precisely the same management, I have seen the white breeds become mangy, while the black one remained perfectly healthy, with the skin soft and smooth. Besides this, they do not consume as much food, proportionately, as most other breeds. To illustrate this, I will give the average feed of some of mine. I have pigs weighing from two to three hundred pounds, breeding sows and boars, which get for their daily feed three good sized ears of corn and three common pailfuls of thin slop, the slop made of six quarts of wheat middlings, or corn and oats. This constitutes the food for each, and produces as fine specimens of this breed as can be found. The reason for this is, I believe, that they assimilate all the food given them, are quiet in disposition, and when kept growing from the start, can be kept in extra order with only a moderate amount of food. Of course when they are growing—that is, when they are not taken from the sow until they are about ten weeks old—we give heavier feeding to sows, with as much green food of different kinds, in its season, as they will consume readily, making the lesser proportion of different kinds of grain.

The best specimens of Berkshires have small, shapely prick ears, are heavily hammed, and rather heavily jowled, with broad shoulders and a square, short, broad nose, with the forehead sometimes dished. In selecting a boar or sow for breeding, look for hams as heavy as possible, as the broad and deep shoulders are more easily found. The straighter you can get the back, especially on the hams, the better the pigs; and avoid one, particularly a boar, which has shelving hams, or a back drooping rapidly from the fore-hips to the tail. I like a good chest, as it denotes strength of constitution, a thing which, I am sorry to admit, has not been considered by many breeders of thoroughbred stock.

In regard to dish-faced Berkshires, they are very hard to find, and yet harder to breed. The best specimen, perhaps, which I ever saw of this kind, was a two-year-old sow, exhibited at the Middletown (Del.) fair, last September. She was imported from the queen's pens, England, and had one of the finest formed heads possible. Many breeders are striving to produce this form of head, but mostly without success.

Feeding Swine in Summer.—A correspondent of the Germantown *Telegraph* writes: My own experience of pork-raising, based upon experience, observation, and probably a little philosophy of things, if written for the benefit of others, would be about as follows: During the hot Summer months I would feed very little solid feed, such as corn in the ear or uncracked. I would keep hogs upon green feed constantly, either grass, oats or rye, and feed them at regular intervals, once or twice a day, upon mashed feed, either shorts, chopped oats or rye, buckwheat, etc., feed in troughs. When fed in this way and at the same time allowed access to water and shade, hogs will bear rowling through the hot months, a very good time if not the best, to take on flesh. This puts them in the best of condition for corn feeding, which should commence about the first of September, when the new crop is still soft and tender. Treated in this way hogs become probably as perfect as any method could make them. Upon the whole, I believe it the cheapest and most economical.

Cost of Preparing Pork for Market.—The charges for slaughtering, cutting and curing the hog product, and for smoking, packing, canvasing the same, in the city of St. Louis, are about as follows:

Hogs slaughtered for slaughter house offal.

Cutting dressed hogs, curing and rendering the lard, "exclusive of salt and cooperage," 25 cents per 100 pounds, hook weight.

Furnishing salt for curing green meats, in bulk, 25 cents per 100 pounds meat, bulk weight.

Packing barrel pork, furnishing salt and pickle, 75 cents per barrel.

Packing hams in tierces, furnishing sweet pickle $1 per tierce.

Sugar curing hams, in open vats, ready for smoking, one cent per pound.

Cooperage furnished at market price.

Storage free on the product to March 1st.

Offal from dressed hogs sold free of charge and proceeds credited to the owner.

Smoking, 25 cents per 100 pounds, weight out of smoke, including fifteen days' storage.

Packing bacon and bulk meats, in casks, "exclusive of package or salt," 50 cents per 1,000 pounds.

Packing bacon or bulk meats, in tierces or boxes, "exclusive of salt, package or paper," 35 cents per package.

Packing bacon, in gunnies or bales, "exclusive of bags or paper," ten cents per package.

Re-packing pork, including pickle, fifty cents per barrel. Extra salt and barrels necessary furnished at market price.

Cleaning bulk sides, one and a half cents each; bones sold and proceeds credited to owner.

Canvasing and washing hams, furnishing all material and one month's storage, one cent per pound.—*Rural World.*

Hog Items.—The pig is a social animal, and generally will fatten faster in company with other hogs than when kept alone.

Pigs, to thrive well, and be healthy, where full fed on corn, should have plentd of salt, sulphur, and wood ashes, where they can run to it and help themselves. Bituminous or soft stone coal will furnish the sulphur, and is quite valuable for hogs; feed it by throwing in a shovelful or two at a time in its natural state only breaking up in pieces the size of a walnut.

The usual practice in the management of hogs is to keep the whole stock for fall killing, through the previous Winter. In this practice lies, perhaps, the secret of want of success in hog keeping. The most economical method, we are inclined to think, would be to keep sows enough to have the whole stock of pen hogs come about the first of March, to be well prepared with roots, a lot of rye or or other early pasture, and a clover field, to furnish both sows and pigs with full supplies of succulent food from the start, and throughout the season. Such management may bring any tolerable breed to a weight of 150 to 175 pounds, by the middle of December.

The *Journal of Agriculture* says: When corn sells for 15½ cents per bushel, pork costs 1¾ cents per pound.

When corn costs 17 cents per bushel, pork costs 2 cents per pound.

When corn costs 25 cents per bushel, pork costs 3 cents per pound.

When corn costs 33 cents per bushel, pork costs 4 cents per pound.

When corn costs 50 cents per bushel, pork costs 5 cents per pound.

This may be correct when hogs are fed on corn alone; but where hogs are raised on pasturage and stubble fields, it costs but little to grow and fatten them.

The Value of a Thoroughbred Boar.—A breeder's circular says that "the thoroughbred pig, in starting a herd, is chiefly valuable in breeding the common stock. By using a thoroughbred boar upon common sows, you get a half-blood that does very well for feeding purposes, which can be further improved by selecting the best sow pigs, feeding them liberally, and again getting a thoroughbred boar and using on them, which, if practiced a few years, will produce porkers equal to the pure blood. But graded or impure males should never be used, as the tendency is to run back to the scrub. The thoroughbred, if purchased young, can be had for from $25 to $30 each. He can be used one season, and sold or castrated and fed, when he will of

himself almost or quite pay for his original cost.

At first thought, to many, the price for a pure-blooded pig may seem high; but, really, it is better to pay the price than let your sows go to a scrub for nothing. Say you pay $25 for a boar, and breed twenty-five sows. They will raise, say, one hundred pigs, which is a low estimate. The pigs then cost you twenty-five cents apiece, and will make hogs that will weigh at fattening time one hundred to two hundred and fifty pounds more than scrubs (which grade pigs will do on the same feed). You have, therefore, an increase of value from $300 to $700 in one year, with the price of pork at $8 per hundred, and you have your boar left. Can you invest your money at a larger per cent.?

Correspondence.

Notes of Travel, and Ideas Upon Health Subjects.

BY MRS. C. F. YOUNG.

WOODBRIDGE,

San Joaquin county, about two miles from Lodi Station is a quiet little rural town of about fifty families, two stores, two smith shops, two hotels—how many saloons this deponent knoweth not,—one school house, one Odd Fellows' and one Masonic hall. The last is used by the Grangers, who number, it is said, seventy-five. There are not any church buildings nor temperance societies, and yet material prosperity is evident in every direction.

The people are largely Southern. They are everywhere proverbial for the real comfort they get out of a little. Low-eaved, rambling houses, with projections, or boxes, added for an extra bed-room or closet, without regard to architectural effect, but "very convenient and handy" for the women folk inside; low ceilings; wide windows; broad, open fireplaces; grassy, sodded door-yards, with bunches of sweet-smelling herbs, loved because reminders of the long-ago homes of childhood; a few chickens; the sleek, petted cow; the gentle old horse—all these things are evidences of contentment. You, doubtless, dear reader, are thinking that a

GRANDMOTHER

would complete the picture. Yes, she is here—or they are here—trembling, gray-haired, loving old ladies. No one but a grandmother could keep every nook and corner of house and yard so scrupulously clean and neat. In all these semi-Southern settlements aged people are found abiding in their own homes, having sons and daughters settled around them. Blessings always attend those who "honor their fathers and mothers.

PROSPERITY.

Several long walks brought to view wheat fields, substantial buildings, good fences and other evidences of prosperity. We judge mixed farming is quite popular. Cows, hogs, sheep, poultry, etc., are not seen in large numbers; but a few to be seen in each of our long walks indicate the value placed upon them. There is only one drawback with these people: they are afraid of strangers, and pin their opinions too much upon the sleeves of their religious and political leaders. It is not possible for *one* man, or class of men, to have *all* the truth. Even a woman may have a truth to tell worthy of credence, which, accepted, would preserve bodies and elevate souls.

THE WORLD MOVES,

and the people with it, in spite of their prejudices. One half our people live too fast—the other, too slow. When will the golden mean be found? The slow half tell us "it is wicked to study physiology; children will learn enough without being taught how bones grow!" The fast half say "it is wicked to have children." They truly know too much. Off of these extremes the drug and quack doctors thrive. Every ailing on the one hand calls for the doctor or his drugs; on the other side, crime is committed, the houses are childless, cold, silent, and—oh! what blighted, wasted women abide in them! Angels pity them! How can they hope for heaven in the hereafter? If the Press is a power in the land, then let the

PRESS INSTRUCT THE PEOPLE,

warning young women and men of the hidden reefs and terrible quicksands. The surface may be ever so smooth in a calm day when you jointly contemplate these untried waters, but—woe, woe, woe to the frail barks that tempt the turning tide.

YOUNG MEN

and women of California, we entreat you, study well these questions. Seek mutually to know the whole truth. Entering into marriage, be sure you are ready and fit to assume its responsibilities. Each one of you gladly accept hints and promptings in reference to the improvement of farms and stock. Will you not try to live each twenty-four hours of your lives temperately, purely, chastely that the children of your love may also be born in

THE ASCENDING SCALE?

How to so live that we may drop out our bad qualities and intensify the good in our nature, is one of the vital questions of the age, imperatively demanding the closest, most conscientious attention of every adult citizen. The gibberish and raving of the inmates of a private asylum for the insane, within a stones throw of our open window, attest the importance of this question. Poor, helpless, ignorant enslaved women—wives while yet children. Wretched unbalanced men, lost through lack of simplest physiological knowledge. How long: O, Lord, how long before knowledge shall run and not *be* glorified, but be permitted to glorify the people receiving it?

"Honor to Whom Honor is Due."

Eds. Agriculturist: We are often given, in speeches and papers, for the edification and encouragement of our boys, glowing accounts of how penniless lads have risen, by their industry and perseverance, to wealth and influence, position and fame. We are told how Benjamin Franklin, a printer-boy, by his industry and frugality, rose to be the eminent philosopher and statesman we all unite in styling him; how Horace Greeley became the foremost journalist of his time; how bankers, railroad kings, merchants, senators, Governors, etc., who were, while quite boys, thrown upon their own resources, to battle against the stream of life alone, have, by their energy and diligence in whatever calling they were engaged, gained for themselves wealth and honor. All this is good, and we are ready to accord all due honor to the men who have so boldly and successfully striven against misfortune and adversity. We are glad that we have such examples of self-made men to point to. But there is another class of men more deserving of honor, we think, than these. The world knows little or nothing of them and, because they have not amassed fortunes, seems to care less. That they have fought just as manfully, been just as industrious and frugal in their habits, equally as noble and worthy (if not more so) in their characters, seems not to be a matter of notice, so long as they have not acquired the same success—wealth. Let us say a word in favor of one of this class. We have not far to go to find him. He is a poor tradesman in our city. Yes, *poor*,—not because he has been an idler or a spendthrift, a drunkard or a gambler, a slow or incompetent workman, but because he had not an opportunity—if he had the desire—to save his earnings. His parents were poor, and it required more than the father could gain by his daily labor to provide his family with the necessaries of life. From the time the son entered his apprenticeship his wages, too, small as they were, were required to help supply his sisters and brothers with bread. After his apprenticeship expired, he went to another town and diligently wrought at his trade. But from here, too, he sent his earnings home to those whom he knew were in need of his help. Nor did this stop when he had arrived at his majority. No, the burden only increased. Now his father, an old, gray-haired man, was unable to do his accustomed part, and the care of the whole family fell upon the shoulders of the son. For years this state of things lasted, and the young man is still poor in the world's goods, but rich in the blessing of those who have had so large a place in his heart.

This is no picture of the imagination, but a true statement; nor is it an isolated case by any means—we have many such men among us. If Mr. Franklin deserved the greater praise for having cut wicks and run errands for a chandler, then surely this man should be honored, for often the people in an Eastern village have seen him, after returning from school and on Saturday, standing in the snow trying to earn a few cents by sawing wood. Mr. Franklin might resolve to "save one-half of his wages," but this poor lad must invest *all* his scanty earnings in another way. And yet his love and care for his home is no credit to him in the sight of a cold, cheerless world—if he is poor. Out upon such a verdict! All honor, *we* say, to such men. Those who have honestly gained wealth and esteem by their worth and industry, are deserving of credit, truly; but the self-denying, noble poor man who has spent himself in his love and care for others has a still greater claim to our honor and praise. The world may not prize his virtue and worth, but such men are the nobility of our race. Because they had not the opportunities of others, they are none the less praiseworthy.

When we raise our voices in eulogy of the successful men who were once errand boys, let us not forget those noble men who began a little lower and fought equally a good fight, though they are not senators, or have not stores of wealth as the fruits of their labor.

> "There are springs of crystal nectar
> Ever swelling out of stone;
> There are purple buds and golden,
> Hidden, crushed and overgrown.
> Crumpled shirt and dirty jacket
> May beclothe the golden ore
> Of the deepest thoughts and feelings;
> Satin vest could do no more.
> * * * * *
> "God, who counts by souls, not stations,"

does not honor so much for success, as for the earnest, pure effort. Let our boys be taught that the acquirement of riches and fame is not the *summa summarum* of success in life. Let them know that we prize higher than all else they can attain to sound principles and noble natures, and encourage them in their efforts in this direction by trying to bestow our praises where due. P. F. P.

San Jose, April, 1875.

[Dedicated to the Patrons.]

VOICES OF THE WORKERS.

THE NEWSPAPER OVERTURNS THE WORLD.

Politics and Religion in the Granges—No. 2.

BY A. GAYLORD SPALDING.

As before quite clearly explained, politics has two very plain and distinct features. One is proper, commendable, and everywhere applicable, relating to the business affairs, commerce, and social arrangements of men. The other is narrow and sectional, disturbing and corrupting the morals and the peace and welfare of society. This latter kind is wholly incompatible with Grange principles, and is therefore rejected from the Order.

Religion, too, is open to the same criticism. There is the true and the false, the practical and the speculative. Religion is natural, and no nation is found without it—being manifested according to mental and moral development. But the sectarian quality cannot come come into the Grange for obvious. The element of principle and humanity is not its all-pervading power. It cuts the people up into antagonizing factions, under senseless creeds and names, and consequently curses while it blesses the world.

THE FAMILY GROUP

of parents and children is a natural and beautiful order of all grades of the human race. Each family is a home, and most happy and heavenly may it be. No such bliss exists elsewhere on earth. The Grange is devised and organized after the family pattern, in larger groups. [Is not "a family in a larger group," *with children left out*, an anomaly?—Eds.] The idea is exceedingly simple and practicable, and most intelligent, perfect, and attractive. No unselfish farmer or workingman can fail to appreciate and accept it. Hurrah! then, for the Granges! Multiply and speed them over the wide continent. Every interest of society comes under the head of politics or religion, which must be freely and fairly discussed, and fully understood. Ignorance is our ruin.

THE BATTLE OF THE GRANGERS

is for labor reform, against a crushing moneyed aristocracy. Old parties and sects are all under the leadership of such an aristocracy—a combined money power with social position and office-holding. They claim their privileges as the rightful heritage of the upper-ten class, on the ground of custom and precedent; and the brute force of sword, cannon, and bloody armies stands ready to defend them, while the working muscle of the common people is ground up for their use. It is a world monopoly of ages, which a world co-operation of Grangers and Sovereigns must overthrow. It is the battle of Armageddon.

THE MONOPOLY AND CORRUPTION OF POLITICS

in our country is well represented by such men as *dis*-Hon. Bill King, of Minnesota. How he gobbled up the votes in his district, by the power of Durham bulls and subsidized newspapers. He won the election, but is bound to hang himself, Judas-like, as a compensation. Shame on the people, and shame on the newspapers. They hang *themselves*, effectually, by such voting and disgracing the ballot-box.

THE SECTARIAN MONOPOLY

and aristocracy is powerfully and proudly represented. Money unstinted is invested. But that first-class Brooklyn scandal, though a black disgrace on civilized Christendom, will fortunately do very much to break the yoke of sectarian thralldom on the working class. Thousands of similar cases may exist around us, but they are plebian, and fail to come to the surface, or get into the newspapers. The character of our much-boasted civilization may be judged by our police gazettes as well as by the quality of high functionaries. What Indian tribe can show a worse moral record? Yet we send abroad our pious missionaries, and talk of exterminating the Modocs, and actually hang them!

OUR COMMON RELIGION

is threadbare with formalism. The religion is bid away too far. It is sky religion. The Grange brings things down among the people—into their houses and home. A heaven right here at our door is far more convenient than one up in the moon. How long will it take to make earth a paradise by devoting a hundred and fifty millions to splendid church buildings in New York, while ninety thousand stout men there are unemployed, with no potatoes in the cellar? A million years won't do it. And yet that is the sectarian method all round, and party politics join in to help it. It is a religion of professional aristocracy, with Andover kid-glove graduates to pound and expound in velvet-cushioned desks. But

THE TRUE GRANGE RELIGION

is better suited to the wants of plain, homely and sensible workingmen.

> "He who knows our greatest needs'
> Reeks not man that counts his beads,
> For righteousness is not in creeds,
> Nor solemn faces;
> But lies rather in kindly deeds
> And Christian graces."

We may well expect a blissful heaven in a future life; but the important work of the Grangers now is, to avoid the hell of monopoly and aristocracy and political damnation. Some contend that good men should stick to the old parties and sects in order to purify and reform them. But clearly that is bad logic and poor philosophy, for a man can never lift himself into a basket while standing *in* it. And, as our new wine of reform needs new bottles to hold it, so we must stand outside of the basket and outside of old parties and sects if we would lift them up. It requires a machine more powerful than any stump puller in the country.

THE GRANGE MOVEMENT,

then, is no mixture and no compromise, but an entirely new departure, out and out. Not in party interest of any kind, nor sect; but it is a fanning-mill, a sifter, that is to separate the cockle and chaff of politics and religion, saving only the clean wheat of *principle*. That is the farmer's gold. We may now discard old names altogether, and be known only as the Grange party. Then nothing is left ambiguous, but all is distinctly understood and boldly outspoken.

No dependence for reform can be placed in any but actual and responsible workers. None of your lily fingers, that seek the easy places and shirk the hard. That style of business is playing out. That is what spoils church and state, and sets them tumbling. We are told a hard story of the carpet-baggers at the South; and however true, the North is sprinkled over thick with carpet-*beggars* in the shape of dandy peddlers and traveling agents for patent speculations, to gain quick and easy fortunes, and avoid the sweat. Thousands graduate from our colleges and strive to stand in public desks and professional offices because such positions are easy, genteel, and well paid. But the money comes out of farmers and workers. Two-thirds of the professional men in the nation are so many two-legged grasshoppers—and worse than the little famine-breeding insects, because they (the two-leggers) stay by, and *eat all the time*. They are always on hand for such fancy things as require the least toil. They are popular dead heads. But we find the true emblems of trust, honor, manliness and national prosperity are the ax, hoe, spade and plow, with "hayseed in the hair."

THE PRINCIPLE OF FRATERNAL UNITY

and co-operation is fundamental in the Grange. This not only kills all monopoly, but it will wipe away that old red dragon of gory war—that most fearful and universal scourge of mankind. Government officers and military men, under our present violent order of things, are interested in the plunder of battle fields, and would therefore be slow to accept any doctrine of permanent peace. Their trade is war. But when all shall become Grangers and Sovereigns, then human carnage will be forced to stop. Othello's occupation will be gone. So roll on the glorious Grange ball round the world. Roll it along!

WOMAN SUFFRAGE.

The woman question now fills up the book. We speak of the Grange as a family order; but no family is without a woman. She is mother, wife, sister, and does a great deal wherever she is. In the hive, she is queen; in sickness, she is the best nurse; and she can tend the baby better than "any other man." If we sleep well at night, a woman has made the soft and downy bed. Every man is proud of his table when a charming lady pours the tea. Where woman is, there is sweetest music and the perfume of roses; and where happiness and love dwell, surely woman is not far away. Then, would not all these beautiful things be represented in her vote? Indeed they would. Good government is not wholly made up of bull dogs, swords and guns, and the noise and smell of gunpowder. And the still, small, gentle voice of woman's ballot could certainly do no harm, could it?

CHAMPLIN, Minn., April, 1875.

Harrowing Wheat.

The uniform testimony of all those who have tried harrowing wheat in the Spring is, says the *Rural World*, that it pays. One subscriber says: "I have acted upon the advice given by you, and I find the result at harvest most satisfactory. I began the custom by harrowing fifteen acres, or about one half the usual number of acres that I sow. My neighbors, who had never seen it done, insisted that it would kill it out. I shall continue the practice, as I have now procured one of the Thomas smoothing harrows, which, in a great measure, enables me to dispense with the roller, which I still use, however, when the early Spring is an unusually dry one. I think by using the harrow that the wheat tillers—that is, stools—out better than when it is not cultivated in the Spring."

Another subscriber writes as follows: "I find that harrowing wheat in the Spring pays well. It gives the wheat a good start, and the harrowed portion ripens as early as the unharrowed part, and has heavier seeds."

DR. HABEL has arrived at the conclusion, after mature study, that guano is not made from the excrements of sea birds, as has been hitherto supposed. Chemical treatment has disclosed an insoluble residue composed of fossil sponge and marine plants, and animalculæ. Hebel's opinion is that guano is made of fossil remains of which the organic matter has been transformed into a nitrogenized substance while the mineral constituents have remained unaltered.

Household Reading.

Words of Council With Parents.

EDS. AGRICULTURIST: Notwithstanding my short acquaintance with your paper, I feel an earnest desire to draw my chair within the "domestic circle" and say a few words to parents.

I have often desired to be an able writer, that I might employ a style of composition so charming in its power of persuasive eloquence that parents every where, and in every condition, would be forced to realize their great responsibility. I am frequently astonished at the manner in which parents (good people, too) regard the welfare of their children. They will talk eloquently about what observation and experience have taught them as regards their horses, cows and pigs, but seldom will a word be uttered in reference to family culture. The little ones that God has committed to their keeping, with the solemn injunction to carefully train, are permitted to grow up in a way to suit convenience. Not because of lack of love—oh, no; but because the trials and burdens of life are suffered to creep in and obscure the path of duty. How many poor, tired and overworked mothers there are who, in order to indulge in the unlimited extravagances of the age, are forced to expend all their time and energy in the vain and unprofitable endeavor to serve the body, while the mind is left neglected.

How many weary, anxious and perplexed fathers there are, too, who are trying in all sorts of ways to reach a higher round in life's great ladder, regardless of consequences. O! the confusion, the turmoil and strife that beset us all in our journeyings up and down. No wonder that He who planned this mysterious ladder, and set each round in wisdom, should have so earnestly warned us of danger. Then be careful, fathers and mothers, guard wisely and well your sacred trust—your homes—your children. Can there be anything more beautiful than a perfect home—a spot more sacred than her domain—a gift more precious than little children?

Mothers, to you especially is a noble work intrusted. Begin it early. Let your little ones feel that you trust them fully. Entertain and instruct them. Converse with them, and encourage them to talk with you. Many a child grows up hard, unimpressible, unloving, simply from the imposed silence in which the first years of life were spent. Remember, too, that innocent amusement is the very life of childhood; that too much restraint is productive of evil. Teach your children to confide in you, to counsel with you in the most trivial affairs that concern them.

But, perhaps I have trespassed sufficiently for once, therefore I will conclude my remarks at some future time. M. E. THOMASSON.

A MOTHER'S INFLUENCE.—Who can measure the influence of a mother on the young and immortal minds of her children? Her looks, her actions, her smiles, or her frowns on her children stamp impressions on their minds which will last forever. She gives a moulding influence to their character, their course of life, their temporal and eternal well being. They rise to the glories and happiness of heaven, or sink to the woes and ruin of a lost eternity, much according as the mother trains them up for God, or allows them, through neglect, to grow up in selfishness and sin. The mother sits at the threshold of their existence, and directs their first tottering footsteps. Her duties lie at the foundations of human society, and from these young springs of life, flow out in all their after existence, streams of bitter or sweet, purified or poisonous.

FALSE DELICACY BETWEEN MOTHERS AND DAUGHTERS.—As young girls near the boundary line where childhood and womanhood meet, there comes a natural, wondering interest as to the diferent relationships they see around them. This curiosity being the voice of nature, imperatively claims satisfaction, and if the mother does not give it legitimately the child will be only too likely to gain it from sources of whose very existence she is ignorant, simply because to her they are superfluous.

There are thousands of mothers who will talk with the kindest unreserve to those not bound to them with any tie but that of friendship, who yet feel the most false and foolish delicacy with their own daughters. I *know* this to be the case. A great many young girls have come to me for information and advice on personal subjects, whom an unnatural reserve kept from applying to their own mothers. I know it again *by experience*. I found it much harder to do my duty in this respect to my own daughters than to the daughters of others. And yet the duty is an imperative one, which requires to be attended to both much earlier and more positively than was necessary in your own case. For assure yourself of one thing, that the knowledge which came to women half a century ago only as the result of experience, is ready now at every street corner and in every kitchen for your little girl, as answer to her first wondering intuition.

Nay, while she still nurses her doll and wears her childhood's aprons, all the mysteries of human nature are questioning her innocent heart. Who is to answer her? Will you leave her to soil her white soul with the filthy fancies of dime novels, or still worse books. Is some servant girl, lewd and ignorant, to usurp her mother's holy office, and defile the sacred sanctuary of your home? Or will you with calm and reverent wisdom lead her into the "house of life," and show her how "fearfully and wonderfully we are made."

Will you not, then, explain to her that this human "body is the temple of the Holy Ghost bought with a price," and that it cannot be defiled, even by an impure thought, without sinning against Him who cleansed it with his own precious blood, making our bodies "members of his own." Such teaching is necessary to keep her morally healthy, and if you can succeed in inspiring her with a profound reverence for purity of soul you have done very much to secure her health, her intellect, and that joyous, cheerful abandon which, though the glorious privilege of natural girlhood, is, alas! every year becoming more rare.

But this first primary instruction neglected, what follows? Physical abuse and degradation. A war against nature which gradually makes your child (born a little lower than the angels) below the beasts of the field.

I am quite aware that this is a very delicate subject, as well as one of the saddest of social problems. But ignoring an evil does not annihilate it. And the anger of those whose false refinement forbids them to speak of things it does not forbid them to do, or the scoffing of the vulgar and light-minded will not deter the serious and benevolent from its consideration.

Physicians see the mighty evil filling our lunatic asylums, robbing marriage and paternity of all its divinity, digging myriads of tiny graves for infants born of parents too enfeebled to give them enduring life, and most of them with a groan of pity "pass by on the other side."

There is no doubt, however, that the great majority of young people now slaves of the most repulsive habits might have been saved had their parents early explained to them the eternal laws of nature, and their intimate connection with "whatsoever is lovely and of good report." And farther, it is also the duty of parents, *having instructed, to watch* until virtue has acquired the strength of habit—of habit whose foundations are laid in piety and knowledge.

Slow, insidious, unsuspected, suicide is becoming a household crime. Children make their own coffins day by day, and parents are either ignorant or indifferent to the fact. Against this sin physicians must become active missionaries, for their words, weighted with knowledge, will have an irresistible influence.

But prevention is always better than cure. And, therefore, mothers and daughters should have but one heart, and fathers and sons walk together as friends.—*Mrs. A. E. Barr, in Science of Health.*

A CHEERFUL HOME.—A single word may disquiet a whole family. One surly glance cast a gloom over a whole household; while a smile, like a gleam of sunshine may light up the darkest and weariest hours. Like unexpected flowers which spring up along our path, full of freshness, fragrance and beauty, so kind words, gentle acts, and sweet dispositions, make glad the home where peace and blessing dwell. And the influences of home perpetuate themselves. The gentle grace of the loving mother lives in her daughters long after her head is pillowed in the dust of earth; and fatherly kindness finds its echo in the nobility and courtesy of sons who come to wear his mantle, and fill his place; while on the other hand, from an unhappy, mis-governed and disorderly home, go forth persons who shall make other homes miserable, and perpetuate the sourness and sadness, the contentions and strifes and railings, which have made their own earthly lives so wretched and distorted.

Toward the cheerful home the children gather "as clouds and as doves to their windows;" while from abodes of discontent and strife and trouble, they fly forth as vultures to rend their prey. The class of men that disturb and distress the world are not those born and nurtured amid the hallowed influence of Christian homes—but rather those whose early life has been a scene of trouble and vexation, who have started wrong in the pilgrimage, and whose course is one of disaster to themselves and trouble to those around them.

Labor-Saving Machinery.

The saving in the operations of husbandry by the use of modern implements and methods is equal to one-half the former cost of working. By the improved plow, labor equivalent to that of one horse in three is saved. By means of drills, two bushels of seed will go as far as three bushels scattered broadcast. The plants come up in rows, and may be tended by horse-hoes; being in the bottom of little furrows, the earth tumbles down against the plants, which is not so readily heaved ont by the Winter's frost. The reaping machine is a saving of more than one-third of the labor when it cuts and rakes, and will eventually save fully three-fourths when it is made to bind automatically, as it shortly will be. The threshing-machine is a saving of two-thirds on the old hand-flail mode. The root-cutters for stock in England, and in some places in the Northern States and Canada, much reduce the labor of Winter feeding. The saving in the labor of handling hay in the field and barn by means of horse-rakes, horse hay-forks, etc., is equal to one-half. With the exception of a grain drill—which had a precarious existence previous to 1776—all these improvements have been commenced and brought to the present relative perfection within the century now closing.—*Harper's for December.*

The only objection to the female chaplain of the Maine Legislature is that she has too much to say.

Butter will remove tar spots. Soap and water will take out the grease stain.

Educational.

A Parody for the School-Room.

BY DWIGHT C. PIERCE.

To know—or not to know—that is the question—
Whether 'tis nobler in the mind to suffer
The evil consequence of ignorance,
Or to go to school; and, grasping new ideas,
Dispel the old ambiguous fogs and mists
That so bewilder the untutored mind;
And, by dispelling end them?—To learn—to know—
And by judicious study say we end
The thousand gross mistakes and tedious ills
So oft occurring—'tis a consummation
Devoutly to be wished. To know; to learn;
To learul perchsuce to 'xplain:—ay, there's the rub!
For as we make the attempt, what dubious thoughts
And shadrous principles present themselves,
In duli confusion, mixing all we know;
Aud ere we shuffle out the right idea,
We make a pause. There's the respect
That makes an explanation live so long;
For who would take the long and crooked route,
The mountain climb, or plunge into the gulf,
Or puzzle over the debate of authors,
Or bear the whips or scorns of time thus spent
To bring before the mind but one idea,
When he himself might his mental nake
With shorter method? Who would yet submit
To be the slave of ignorance and doubt,
But that the dread of being in the rear,
The butt of ridicule, or something to
Be learned, puzzles the will; and makes him bear
The ills in consequence, rather than toil
To learn the truths he yet knows nothing of.
Thus apprehension oft retards our course,
And thus the youthful mind is oft dismayed,
And lost, amidst the mass of human woes
That by pernicious ignorance is swayed.
And should I close by thus portraying ill,
'Twould leave the matter none the better still;
For when you're sick should the physician say,
Your case is very bad, indeed; I pray
To know what good might thus be done; if he
Did not prescribe and give the remedy?
So I would say to all who tim'rous are,
To nobly struggle, break the iron bar;
'Tis education frees the mind of man,
And teaches him the universe to scan.

Taking Agricultural Papers.

If there is any one thing that a farmer should always make a necessity, it is a good agricultural paper. We know there are a large number of farmers who think they cannot afford to pay the price, and who think it is money thrown away; but we will venture the assertion that no farmer will ever lose anything by subscribing for at least one paper devoted to his interests, and in ninety-nine cases out of a hundred, if he will only read it carefully, he will find it will pay a thousand per cent. profit.

We do not propose to say that he must follow everything that he reads, but use his own judgment in all cases. What may be a success in one particular locality, may under other circumstances and in a different place be an entire failure. But, taking the year round, and reading the fifty two numbers the farmer will receive, he is sure to find more or less that will profit him; he will find in a very short time that he will look upon his weekly paper as a necessity, and one that cannot easily be dispensed with. If the farmer has boys whom he wishes to raise up intelligently they must have something to read and instruct them—something that will induce them to try new experiments themselves, and see if, by care and work, they cannot better their stock and grain. Love and learn is what we want. One of the best ways to help your boy to make a good farmer is a good, readable agricultural paper, one that works for the farmer's interest, and is practical and reliable. Every other branch of trade has its weekly or monthly paper, and the farmer should have his. Just the same as every other branch of trade has its organization, so the farmer should have his. But these different organizations would not have half their strength were it not for their weekly and monthly papers, which circulate among them and inform them of what is going on in their particular branch of trade.—"*Farmer,*" *in Rural World.*

Common Sense.—It has been said, in another form of expression, that the slightest excess of expenses over income is poverty, and the slightest excess of income over expenses is wealth. The ability of practical farmers to master this great problem of life is not so much dependent upon what they know of their business as upon the faculty to apply what they know. Success in business is due to the administration. Capacity in administration is due to the faculty, power, or quality called common sense, which everybody speaks well of and nobody understands exactly. We infer its presence or its absence from the results of a man's life. We venture upon the definition of the phrase we are using, not so much for the purpose of making its meaning clear as for the greater purpose of giving it a loftier place in your thoughts. Common sense is a degree, a high degree—in fine, the highest degree of human wisdom applied to practical things. It is not learning; it is not knowledge; it is rather the faculty of applying what we may know to what we do. Other things being equal, the practical farmer who knows the most will do the best; but other things not being equal, a man who excells in wisdom and administration may surpass a man of greater learning, or even greater knowledge of things. But do not allow this suggestion to lead you to place a low estimate upon learning, whether general or professional; culture of every sort gives us capacity to appreciate wisdom, and opportunity also for its exercise.—*Practical Farmer.*

Pure Expression.—Every word that falls from the lips of mothers and sisters should be pure and concise and simple; not pearls such as fall from the lips of a princess, but sweet, good words, that little children can gather without fear of soil, or may regret to pain through all their life. Children should be taught the use of good, strong, expressive words—words that mean exactly what they should express in their proper places. If a child or young person has a loose, flung-together way of stringing words when endeavoring to say something, he should be made to "try again" and see if he cannot do better. It is painful to hear many girls talk. They begin with "My gracious!" and interlard it with "So sweet" and "So queenly" and so many phrases that one is tempted to believe they have no training at all, or else their mothers are very, very foolish women. There is nothing more disgusting than the twaddle of ill-bred girls; one is provoked often into taking a paper and reading, and letting them ripple and gurgle on, like brooks that flow they know not whither. Mr heart warms with love for sensible girls and pure boys; and, after all, if our girls and boys are not this, I fear it is our own fault—for this great trust rests in the hearts and hands of the women of our land. If we have a noble, useful purpose in life, we shall infuse the right spirit into those around us.

Words—Thoughts—Actions.—They are all important, and every one of them tell upon our present and future state. The effect of an action—or thought—a word, may not be immediately evident; it may never be discovered by us or other mortals, but it is there, it is in our lives, and it will continue to work upon our destiny for evil or good when our bodies shall lie mouldering beneath the sod. Like flakes of snow that fall unperceived upon the earth, the seeming unimportant events of life succeed one another; and as the snow gathers together—as the avalanche, so are our habits established and our character determined. No single flake that is added to the drift produces a sensible change; no single action creates, however it may exhibit, a man's character; but as the tempest hurls the avalanche down the mountain and overwhelms the inhabitants so passion, acting upon the elements of mischief which pernicious habits have brought together by imperceptible accumulation, may overthrow the principles of truth and virtue. How important it is, then, that we maintain the most sleepless guard upon our passions, and scrupulously weigh out every word, thought and action.

Help the Children.—Parents, help the children. Help them in what? To study and learn the school lessons. Do not let them go to the school with no lessons. Talk it over together, and there will be some things you can tell the little ones, and some ways in which you can help them. There will be sure to be some things you can make them understand.

Older brothers and sisters, help the children. You can have no idea, if you have not tried it, how much good you can do in this way. Moreover, you will find your own ideas of a subject much clearer, after you have tried to make it plain to your younger brothers and sisters. Help them about reading their school books. When they say they have read them, talk with them about what they have read. Ask them questions about it. See if they understand it. Make them feel that to read and understand the book is the thing to be sought not the carrying to and fro of a book more suitable for their fathers and mothers than for themselves.—*Times.*

How to Keep a Situation.—Boys, be ready to throw in an odd half hour or an hour's time when it will be an accommodation, and do not seem to make a merit of it. Do it heartily. Though not a word be said, your employer will make a note of it. Make yourself indispensable to him, and he will lose many of the opposite kind before he will part with you. Those young men who watch the clock to see the very second their working hour is up—who leave, no matter what state the work may be in, at precisely the instant—who calculate the extra amount they can slight their work, and yet not get reproved—who are lavish of their employer's goods—will always be the first to receive notice, when times are dull, that their services are no longer required.

Color and Germination.

Actinism is the chemical power which is necessary to excite germination in plants. It emanates from the blue ray of the spectrum, and is the same power which operates on the sensitive silver in photography. Seeds will not germinate so long as they are exposed to bright light. How the actinic ray reaches the seed in the ground is hard to understand; but that it does penetrate where the luminous ray is unable to reach is plain from experiments, which go also to show that the exclusion of the luminous ray is necessary for the operation of the actinic. Shade is always—absolute darkness sometimes necessary for the success of the germinating process. Plant cress seed an inch deep in three boxes; over the first place a blue, over the second a yellow, and over the third a red glass.

The seeds under the blue glass will be up days before those under the red; and of those under the red a few only will germinate. Those under the yellow will not germinate at all. It is found that those seeds which come up under a white glass in from eight to fourteen days, will, under a blue glass, be up in from two to five days; that where thirty per cent. of seeds came up before, sixty per cent. can now be raised; and that some seeds from tropical countries, which could not formerly be raised in this climate under a white frame, will germinate freely under a blue one.

It would seem that the depth to which the air can penetrate the soil is the measure of the depth of germination. This is the practical result.—*Popular Science.*

Splitting buds, to make them produce trees bearing apples half sweet and half sour, is denounced by a New England nurseryman in the Boston *Cultivator*. He says if you unroll a bud you will find a minute green point at the centre, to cut through which would simply kill it. like a knife in the heart of an animal. If the half of a bud alone could be taken and grown, and the crop would be half apples all over the tree, he would give more credit to the old tradition.

Boys and Girls.

Mollie's Troubles.

I AM little Mollie,
Eight years old to-day,
Never have done nothin'
Only just to play;
Gran'ma says that idleness
Worstest kind o' sin;
Got to learn to work, I s'pose,
Might as well begin.

So I hemmed a towel—
Real well, mamma said—
Had a dre'ful time, though,
Losin' out my thread;
For somehn' ailed the needle,
Don't know 'zacly what,
Till mamma took and tied it
In a little knot.

Don't like hemmin' towels,
'Taint a bit of fun;
I was dre'ful thankful
When the thing was done.
'Cause then I sewed for dolly—
Made a little dress,
And made it just as nice, too,
As you could, I guess.

Made it wiz two ruffles,
Overskirt and basque!
Now, what more, I wonder,
Could a dolly ask:
'Twas much more interestin'
Than hemmin' towels, too—
I wonder why the good things
Are so hard to do?

Then I pared some apples,
Helpin' Kate, the cook;
Then I read my lesson
In the old spellin' book.
Now, spellin' books are awful
Everybody knows;
Just made to try our patience—
Good for that I s'pose.

When night comes, I often
Hear my mamma say:
"Didn't 'spect, this mornin',
Such a busy day.
Seems to me I never had
Quite so much to do."
Tell you I can sympathize—
Feel just that way, too.

How a Lad Wheeled Himself Into Fortune and Influence.

At a meeting of the stockholders of a prominent railway corporation, recently held in Boston, there were present two gentlemen, both up in years, one, however, considerably the senior of the other. In talking of the old times gone by, the younger gentleman called the attention of his friends, and told a pleasant little story, which should be read with profit by every poor, industrious and striving lad. We use his own language:

"Nearly half a century ago, gentlemen, I was put upon the world to make my own living. I was stout, willing and able, considering my tender years, and secured a place in a hardware store, to do all sorts of chores required. I was paid seventy-five dollars per year for my services. One day, after I had been at work three months or more, my friend there, Mr. B., who holds his age remarkably well, came into the store and bought a large bill of shovels and tongs, sad-irons and pans, buckets, scrapers and scuttles, for he was to be married next day, and was supplying his household in advance, as was the groom's custom in those days. The articles were packed on a barrow, and made a load sufficiently heavy for a young mule. But, more willing than able, I started off, proud that I could move such a mass on the wheelbarrow. I got on remarkably well till I struck the mud road, now Seventh Avenue, leading to my friend B.'s house. There I toiled and tugged, and tugged and toiled, and could not budge the load up the hill, the wheel going its full half diameter in the mud every time I would try to propel it forward. Finally a good-natured Irishman passing by with a dray took my barrow, self and all on his vehicle, and in consideration of my promise to pay him a 'bit,' landed me at my destination.

"I counted the articles carefully as I delivered them, and with my empty barrow trudged my way back, whistling with glee over my triumph over difficulty. Some weeks after I paid the Irishman the 'bit,' and never got it back from my employers. (Mr. B., I am sure, would have remunerated me, but he never before heard this story; so if he is inclined, he can compromise the debt by sending me a bushel of his rare ripe peaches next Fall.) But to the moral. A merchant had witnessed my struggles, and how zealously I labored to deliver that load of hardware; he even watched me to the house, and saw me count each piece as I landed it in the doorway. He sent for me the next day, asked my name, told me he had a reward for my industry and cheerfulness under difficulty, in the shape of a five hundred dollar clerkship in his establishment. I accepted, and now, after nearly half a century has passed, I look back and say I wheeled myself into all I own, for that reward of perseverance was my grand stepping-stone to fortune."

The speaker was a very wealthy banker, a man of influence and position, and one universally respected for many good qualities of head and heart. Boys, take a moral from this story, and be willing and industrious. You do not know how many eyes are upon you to discover whether you are sluggish and careless, or industrious and willing, or how many there are who, if you are moral and worthy, will give you a stepping-stone to wealth and position.—*Arthur's Magazine.*

SILK-LINED HOUSE.—I heard too little boys down by the brook to-day, talking about their fathers' houses, and boasting how grand they were. Johnny said his house had a velvet carpet in the parlor, and lace curtains at the windows. Willie said his house had splendid glass chandeliers, that sparkled like diamonds; and the walls were beautifully painted. I thought I would like to tell them about a house very much more wonderful than those they lived in, because it is built by a small insect.

This house is made by a kind of spider that lives in California, and is called the mason-spider. His house is very marvelous for such a little fellow to make all by himself, without any hammer, or saw, or trowel, or axe, or nails, or plaster, or any such things as men use in building; and yet his mansion is fit for a little queen; for it is lined throughout with white silk!

This spider's house is nearly as large as a hen's egg, and is built of a sort of red clay, almost as handsome as the brown stone they are so proud of in New York city. It is cylindrical in shape. The top opens with a little trap-door, which is fastened with a hinge, and shuts of itself. The door and inside are lined with the most delicate white silk, finer than the costliest dress ever worn by a lady.

Mr. Spider builds his house in some crevice or bores a cylindrical hole in the clay, so that all is concealed from view except this tiny trap-door. When he sees an enemy approaching, he runs quickly to his silk-lined house, swings open the little door, goes in, and, as the door shuts tightly after him, holds it firmly by grasping his claws in two openings in the white-silk lining of the door, just large enough to admit his little hands or feet, which ever you choose to call them; and here nestled in this luxurious retreat, he bids defiance to all intruders.

I heard all about this spider from a gentleman who had been to California, and who had brought home one of these red-clay, silk-lined houses. He was showing it to some children as they were walking near me. I wish you all could have seen it.—*St. Nicholas.*

THE Agricultural Society of France has offered prizes of 1000 francs ($200) each for the best method of artificial irrigation, or the best means of destroying the *Phylloxera vastatrix*, for the best economical means of utilizing the beet root and its products, and for the educational establishment which shall have taken the best means to instruct in agriculture and horticulture.

Mole and Toads.

The mole is a much abused animal. He is generally believed to be a vegetarian, but, on the contrary, he is carnivorous, living upon the larva or grubs of winged insects or upon insects whose proper habitat is in the earth. We have never detected a mole eating a plant, but in every case where the plant has been under-run by the mole and consequently wilted, we have found that its roots had been previously eaten off by the larva of the cockchafer (June bug) or by some other insect. Friend in the country, whom we visited during the Summer, complained of the havoc made by moles in a large bed of lilies. On examination we found scores of the shoots of the lilies, wilting and dying on the rows, which had been under-run by the moles. These shoots were found gnawed off, and in a manner to indicate, beyond doubt, that they were destroyed by the grub or the larva of the cockchafer, and not by the moles. The bulbs, planted six or more inches deep, were untouched, and the burrows of the moles were not more than three or four inches below the surface of the soil. Searching in other parts of the bed we found grubs busily at work—the bed, part of a freshly turned-under, piece of grass land, being full of them, as such land is always sure to be.

The mole, by burrowing about in our gardens in search of his food, often does much mischief by running under small, freshly set out plants; but we have the choice of two evils—the bearing with the small amount of injury he does, or bearing the far greater annoyance and injury produced by grubs and worms. His presence is a sure sign that our gardens are, or have been, infested with these. The accusation that he is a vegetable eater is a curious instance of jumping to conclusions and of the making of reliable evidence out of mere coincidences. Because plants are found gnawed through and die when over his burrow, it is concluded that he is the cause, whereas he was only destroying the destroyer—rendering a service instead of doing an injury.

The toad—almost universally despised and upbraided for his ugliness—is, yet, a useful, good-natured, quiet fellow, who recognizes his friends and those who are kind to him. We have some half dozen of them in our small garden, and among them one old patriarch who, when we are digging or hoeing, will sit winking and blinking at us with his pretty eyes, and often compel us to lift or drive him aside to get him out of harm's way. He will stay by us for hours, evidently feeling that he need fear no hurt. Like the sparrow, the toad has been considered a nuisance, and in some sections exterminated; but the exterminators have been only too glad, afterwards, to get him back by the expenditure of large sums of money. So useful are toads in gardens that they are sold in France by the dozen, for the purpose of stocking gardens to free them from many injurious insects. The toad lives almost entirely on winged insect, and never does harm to the plant.

We trust that our readers will accept this plea for these useful laborers in our gardens, and not destroy them on false accusation. By observing their habits closely and discerningly it will be found that they are friends, and neither enemies nor intruders. The ant eats the eggs of insects; the mole larva, and the toad the winged insect itself.—*American Garden.*

DRILLING WHEAT.—The *American Agriculturist* says every year's experience is in favor of drilling wheat. It shows more and more that, as against sowing the seed broadcast, it is economical in labor and seed, and gives a better crop. The difference in labor is at least $1 an acre, or the cost of two harrowings after sowing, on one cultivating. The difference in seed is at least half a bushel, or fifty cents to $1 an acre, and the difference in the crop is fully one-fourth, or upon fairly good soil, six bushels, or $9 per acre.

CARBOLIC ACID.

(*Continued from page 99.*)

CATTLE DISEASE

in Europe, the rinderpest. It was used about the stalls in the proportion of 2 pounds or pints to the barrel or 40 gallons of water. In the pleuro-pneumonia of cattle it has been found equally serviceable used in the same way. In these and other blood diseases in cattle, I would advise the internal administration of carbolic acid as a drink in the proportion of half an ounce of the acid to the gallon of water. In murrain, rinderpest, the Texas cattle disease and others of a like fatal character no other remedy has been found of any specific value whatever. If, as thought by many, these diseases depend upon the introduction into the circulation of

POISONOUS SPORES, OR ANIMALCULES,

we must follow them into the circulation, run them down, capture and destroy them in the body by an agent which we know will destroy them out of the body.

A singular disease occurred in our neiboring county of Santa Cruz two or three years ago. "The first symptoms appear to be an itching, or the desire to rub some portion of the body, the friction momentarily allaying the torment, which soon returns with increased violence until skin and hair are rubbed off; the animal becomes frantic, and dies in a period varying from eight to twenty-four hours after the first symptoms have shown themselves. Sometimes they bleed to death. Mr. R. McClure, veterinary surgeon of Philadelphia, attributes the disease to entozoic parasites taken into the stomach from the grass, in the form of *ova* of these parasites." These were cases in which carbolic acid, administered internally, would in all probability have destroyed the paratites and saved the animals.

The known efficacy of carbolic acid as a wash in the

SCAB AND ROT IN SHEEP

needs no comment. It may be equally serviceable in grub in the head if used at an early stage of the disease.

On account of its deadly influence upon the lowest forms of animal and vegetable life, it has been used with great success among our

DOMESTIC FOWLS.

These are well known at times to be afflicted with vermin that literally eat them up. Hens will sometimes be found setting upon a nest full of eggs dead and covered with millions of lice. If these latter be examined they will be found filled with blood. But take your hens and apply a solution of this acid in about the strength of an ounce to a gallon of water to the bodies of the birds, under their wings, and sprinkle the same over the walls, roosts, and nests of the hen houses, and these vampires will soon disappear. In cases of swelled head, staggers and other epidemic and contagious diseases a few drops of the acid might be added to their water troughs, and the disinfectant solution mentioned above might be sprinkled about the houses and suspended in saturated rags among their roosts. In the

KIDNEY DISEASE AND MEASLES OF HOGS,

and in the distemper in dogs and colts, carbolic acid used as directed has been found of great service.

In our limited space we have been able to take but a passing glance at this important subject. Volumes might be written without exhausting it. With hundreds and thousands of intelligent observers, however, throughout the country its successful employment in many of the

DISEASES OF BOTH MAN AND BEAST

will be only a question of time. When we reflect that it is derived from coal, we cannot wonder that it should resemble its progenitor in its multifarious uses; for coal warms the civilized world, cooks for half of mankind, besides turning half their machinery; propels thousands of ocean palaces round the world; and presents us with pigments that vie with the rainbow in its brilliant hues. And why should it not? It is but the concentrated essence of the forests of the ancient world. Luxuriating in an atmospheric ocean of carbonic acid gas, what wonder that those ancient trees should gather and store up the wealth of hydro-carbons that now light the humble tenements of the poor, illuminate the palaces of the rich, and flash their diamond lights along the thoroughfares of the great cities of the world. What wonder that it should contain valuable dyes, brilliant colors, exquisite perfumes and valuable remedies when those old trees bloomed and basked in the light and warmth of a genial sun? It is but ancient chemistry repeating itself. It is but the resurrection and reproduction of the solar rays of the old world after they had laid for countless ages embalmed in the rocky mausoleums of earth.

San Jose, April, 1875.

NEW PUBLICATIONS.

Resources of Santa Clara Valley, California. Published by the San Jose Board of Trade. Illustrated with engravings of several public buildings and private residences. 32 pages. *Mercury* print. Price, 15 cents.

This book is designed to show the advantages of our valley as a place of residence; and the climate, soil, productions, educational and other important matters are placed before enquirers in a concise and readable shape. A map of the county is bound in with the book. Send stamp and 15 cents to San Jose Board of Trade for a copy.

Life and Career of Tiburcio Vasquez, the Bandit and Murderer. By Eugene T. Sawyer. Price, 50 cents. B. H. Cottle, publisher, San Jose.

This is the title of a 48-page pamphlet, in cover, illustrated with life-like portraits of Vasquez and Sheriff Adams. It is as complete and accurate an account as could be written within the same space. Probable there is not a person living so well able to write this work as Mr. Sawyer. As a reporter, he has kept close track of the bandit, and has interviewed parties concerned and Vasquez himself, and written more and oftener for the press concerning his career, capture and execution than any other man. Mr. E. K. Dunlap, at the post-office newstand, San Jose, has procured the sole agency for the book. It will be found intensely interesting.

AVERILL CHEMICAL PAINT.

The Averill Chemical Paint has evidently now a run of business that it deserves. Since Tyler Beach, our old townsman, took the management of the manufactory it has done a splendid business. Parties living in the country about San Jose, who think of painting, are referred to the following named parties and buildings in San Jose that have used it: Mr. Tisdale, of the Farmer's Gold Bank, on the Alameda; D. C. Bailey's house on Third street; Mrs. Ashley's fine house, fronting St. Jame's Park; the two new houses built by Mrs. Hawes on Second street. James Lick is using a laage amount (600 gallons) on his buildings on Lick's homestead. Mr. J. S. Carter, grain dealer, has painted his barn with No. 4 tint. Theodore Lienzen, Architect, is using it on his buildings. Hay's new building, on Second street, adjoining Central Market, and many others. By examining for yourselves before purchasing paint, you will be convinced that for superior body and gloss there is no paint equal to it. It is at once the cheapest, most durable, and best paint made, and is ready prepared for use without any mixing.

NEW STORE AND FIRM.

Messrs. Smith & Ryder, jewelers, have fitted up the rooms in Wilcox Block formerly occupied by the Farmers' National Gold Bank and opened a fine assortment of American watches, clocks, and gold jewelry. They will make a specialty of heavy, strong watches for farmers' use. They are also sole agents for the Chickering piano and Estey cottage organ. Read their advertisement and give them a call.

Nothing has yet been developed in regard to the Calaveras valley water project. The company of which Felton and McLaughlin are the leading spirits, is holding back, awaiting developments in San Francisco. They think that that city, before long, must look to them for its water supply. Then they will conclude the purchase of the land in the Calaveras valley and proceed to the erection of the great dam, which will have a height of 230 feet. The water will cover an area of about 1400 acres, and will have an average depth of 100 feet. The volume of water will be immense, and will be gathered from the creeks known as Smith's, the Arroyo Hondo, and the Calaveras. The reservoir will have a water shed of about 254 square miles. The cost of purchasing all the land required by the company will be about $200,000. Of this amount $45,000 have already been paid. The balance will be paid on the first of December next.—*Mercury.*

The habit of being always industriously employed is a great safeguard through life, as well as essential to the cultivation of every virtue.

ORCHARD FOR SALE

CONTAINING TEN ACRES OF THE Very Best Land, fully improved. On the place are 3 acres of Blackberries, 1 acre of Strawberries, 500 Bartlett Pear trees three years old, just coming into bearing; 100 Winter Nelis trees, three years old; 1 acre of Foreign Grapes; an Old Orchard in full bearing of Quince, Bartlett, Winter Nelis and Easter Beurre Pears, 500 French Prune trees. Also, a House, Barn, Carriage House, 3 superior Wells, 2 Windmills, and a Horse-power for raising water. For terms, etc., apply, either by letter or personally, to

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S. B. CALDWELL, W. C. T.

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It Does not Crack, nor Chalk, nor Peel Off.

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Remember, it is prepared in Liquid Form, ready for application; can be obtained of Any Shade or Color, and is Composed of the Best Materials, thoroughly incorporated, so that it does not spoil by standing.

For Beauty of Finish and Brilliancy of Color it is without a rival.

Remember, with this Paint you can do your own painting better than it can be done with any other Paint.

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This Bank issues "Deposit Receipts," bearing interest at 6, 8 and 10 per cent per annum; interest payable promptly at the end of six months from date of deposit. The "Receipt" may be transferred by indorsement and the principle with interest paid to holder.

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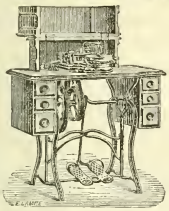

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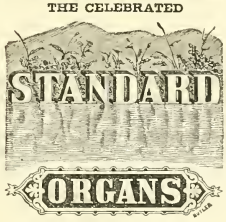

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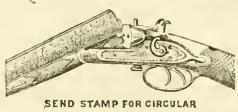

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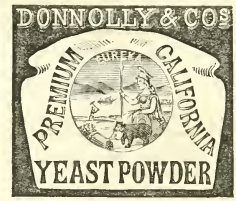

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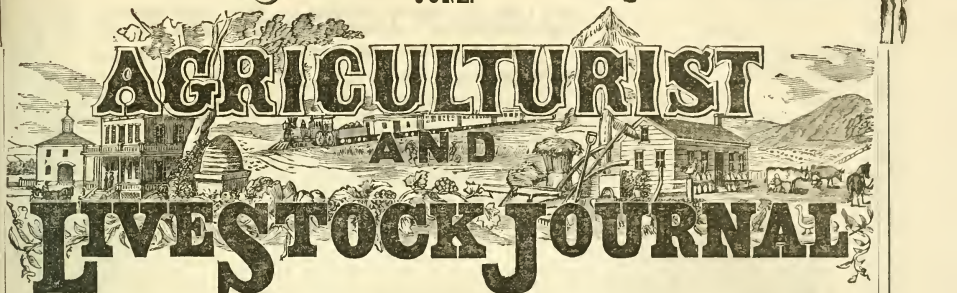
Volume 6. CALIFORNIA Number 6.

JUNE.



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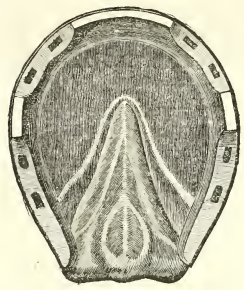

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., June, 1875. No. 6.

A NEW GRAPE-VINE PEST.

Our attention was called by Mr. F. Garrigus, of Santa Clara, to the ravages of some sort of a small bug, flea or fly that had attacked Mr. Norman Porter's vineyard which is situated upon chimasel land near the foot of the mountains at the west of our valley. Also, Mr. D. C. Feeley brought to our office some of the same sort of insects, that he said were attacking a small vineyard not his own in the foot-hills of the same range. After a look at the insects through a microscope, we rode over to the Porter place, and in company with Mr. Stone, who has charge of the farm and who kindly assisted us in bottling a few more of the bugs, we made a close observation of the habits of the insect throughout the vineyard. Then at home we again examined with the microscope. To the naked eye the full-grown insect is about one-tenth of an inch long, is dark-colored, has wings much like those of a common fly, prominent eyes, oval body, and when it is approached exhibits fear, and if disturbed, with a quick motion, almost a hop, it either flies or drops to the ground, where it seeks shelter under clods of earth, dead weeds or other rubbish of any kind. The young bugs, when first hatched, look like tiny, light-colored spiders. As they get larger they more nearly resemble the green aphis in shape, not in color, and do not get wings apparently till the last shedding of the skin. They work in groups and where they attack a vine they first tap the largest leaves and the bark near the base of the new growth of wood, and invariably take the tenderest new growth last, seeming to prefer a growth nearly matured to the tender new shoots. They will cluster thickly upon whatever they attack. As they rest upon the vines their heads are always towards the ends of the vines, and with such regularity do they cluster upon the wood that one might easily miss seeing them did not the vine wither and the leaves dry up wherever the insects infest them. Throughout the vineyard of sixty acres the bugs seemed to be working in some spots very badly, in others but little. Some of the vines were apparently entirely destroyed, and it was often that they made a clean sweep of whatever vine they attacked. In an adjoining young almond orchard of thirty acres we found some, but they did not seem to like the almond much. Several young English walnut trees had been attacked, some lower limbs killed but not the whole tree. Several species of weeds were covered, but a sort of annual milkweed that is very abundant upon the place seemed to be the favorite food. Mr. Stone thought that this weed is what brought them there, and said that it grew thickly in the vineyard and was not plowed up last Spring until it was almost knee-high. The bugs swarm in almost countless millions in the half-buried stuff that was turned under, from the smallest to the largest sized bugs. Mr. Stone had sprinkled sulphur and tried to kill the bugs, but had finally given it up, as the very ground seemed so full of them. He had been advised to use carbolic acid, but as nothing less than a thunder shower of it would reach them all, he despaired of that remedy. We noticed particularly that the bugs do not burrow in clean earth, but resort to the foul stuff half-buried in the soil. We advised raking the ground clean and piling the dead weeds and rubbish between the rows of vines, thus laying traps for them. It seems that at night and when the wind blows hard the bugs leave the vines and seek a shelter. Where there was not stuff enough upon the ground to burn readily, we advised the adding of straw, and then when the bugs were all collected in the shelters thus provided, to apply the torch. We are of the opinion that this pest, alarming as it seems to be and is, can easily and cheaply be destroyed in this way, so that but little damage to vineyards will necessarily result. We do not blame the vineyard men for being alarmed, only we wish they were less inclined to keep the matter a secret, fearing it would injure their prospects in case they should desire to dispose of their property. We understand that Norman Porter's fine vineyard and orchard have been before the market for some time, and we were cautioned to say nothing to injure him. We certainly have no desire to. His 90 acres of almonds and choice varieties of grapes must be a fortune to any one in spite of bugs, if properly managed. Besides, such bugs only make their appearance once or twice in a generation, and at most only last two or three years at a time; and if they can easily be destroyed, as we have no doubt they can be, the damage will be trifling indeed.

Microscopically we have made but a partial examination. The insect belongs to the order HEMIPTERA. Although in some respects it is closely allied to the *Aphididæ*, it is really a *Cicadadæ*. In other words, it is more of a harvest fly than a plant louse. It is something like the vine-fretter of Europe and the leaf-hopper of the East, that so nearly destroyed the vineyards that some persons abandoned their grapevines many years ago. But as we fail to find an accurate description of this bug, we think it a distinct variety, peculiar to our climate. When we take into consideration, for instance, the fact that over 4,000 species of wevils have actually been scientifically named and described, what need we wonder that we have here a harvest bug somewhat different from what has been observed in any other country? And why should not we take a little pride in thinking we have a bug of our own, as well as a locust of our own in California? This bug does not eat, has no jaws, but lives upon the juices of the plants, which it draws through a horny, black beak, attached to the under side of its face, and which lies bent under the breast, reaching to the abdomen, when not in use. Attached to this beak, near its hilt, is a sharp, needle-like lance, with which to puncture the bark before applying its beak. Its head and thorax is half the length of its body, which is an elongated oval. The antennæ, or feelers, are three-jointed, and about the length of its beak, which is also three-jointed. The hind legs are not larger than the others, but the thighs are dark-colored. All the feet are three-jointed, and the last joint is dark-colored. The foot has two claws, one of which is much stronger than the other. The wings slope to the sides slightly; wing-covers transparent. When crushed between the fingers it emits a chinch or bed-bug odor. The full-sized insect has few marks or stripes, and is a chocolate color, darkest on its shoulders. The young are more or less colored from a light straw to a deep orange in blotches with chocolate. We think the young are hatched before leaving the abdomen of the female, but of this we are not certain. There is little transformation during the different stages of growth until the full-grown winged insect appears..

A perfect description of this insect, which we are not now prepared to give, would be mainly interesting to scientific readers. But everyone who either owns a grape vine or eats a grape must feel an interest in the advent of this bug. How to prevent and how to destroy this grape-pest is a matter of much concern. To learn its correct name, to ascertain its nature and habits, so as to best understand how to accomplish its destruction is the work of the scientist, and everyone is a scientist to the extent that he understands the facts, principles and nature of things, and how to apply means to accomplish a given end.

Addenda.—Since writing the above we have seen Mr. Stone again. He found that the traps of weeds and straw would not work, as the bugs would be close to the ground under the piles, and as soon as the flame was put to them they would scatter, and by the time the heat reached the ground the bugs would be gone. But Mr. Stone has tried kerosene with success. One-third kerosene and two-thirds water sprinkled upon the vines would kill all the bugs it touched and prevent the bugs from again attacking the vines once wet with the kerosene. Mr. Stone is sure that he now has the power to save the vines from the bugs. Our theory, though plausible, would not stand the practice, which after all is the only reliable test. The only question now is, how much kerosene will the grapevines stand without being killed or injured.

Benj. Casey. S. H. Herring.

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EDITORIAL NOTES.

Pestifferous.—The dry season appears to be favorable to the life of insect pests. The grasshoppers in some places are bad; worse in Colorado and adjoining Territories than in California. They are literally devastating a large extent of inhabited country, destroying millions of property in growing crops. In our Santa Clara valley the caterpillars are destroying the fruit crop in some orchards; others they have not troubled. We saw hundreds of apple trees in Mr. Gould's and Mr. Watkins' orchards with the foliage stripped from them. They are not the tent caterpillar, but when not eating the leaves cluster together on the large limbs and trunks of the trees. When in this position it would not be a difficult matter to destroy great numbers of them, but we saw no disposition to attempt their destruction, and were told that there is so little profit in fruit culture that it would not pay to spend the time necessary to kill them. Also the live-oak trees are infested with caterpillars—a different variety from those on the fruit trees. These consume the hard foliage as a fire, leaving the trees as desolate as a deciduous tree in Winter. The caterpillars on the oak have large heads, nearly smooth bodies, and do not live in tents or cluster together much. They are about an inch and a half long. The one on apple trees is at least two inches long, and is quite hairy, with apparently pointed ends. There is another much smaller caterpillar troubling the pear trees in some localities. Squash bugs are plenty, and the grape vine fly is getting worse every day, so we are told. Observing persons say that many insects presage a dry season to come, or a series of dry seasons.

In order to support the "great and growing agricultural and industrial interests of the Pacific coast," another liquor paper has been started in San Francisco. It comes out like a bloody pirate that it is, under a flag not its own. It calls itself "temperance" because it wants to appear respectable, while its own black flag is hidden. But it will deceive no one by this pretense—it only shows its own cupidity. It is published by Carmany & Co.

The fruit crop will be much lighter this season than our orchardists at first thought. The young fruit has commenced falling before being half grown—some varieties are nearly a failure. It is thought that the heavy April frosts so weakened the embryo fruit that it could never perfectly develop. On the whole it is estimated there will not be over one-half a crop this season. There will probably be enough to supply the demand for green fruit at paying prices, but the drying and canning factories will be likely to run short of material. The grape crop, so far as we can learn, promises to be abundant.

Chaos Eclipsed.—We have been lately forced into having some experience in law and the courts, with a lawyer (so called) against us. We have come to the conclusion that any person who expects to find justice in that way is very verdant. That law is made quite as much to elude as to secure justice, and those who administer and judge the law are far from perfect in conscience and in judgment. The dishonest man, the trickster, and the perjurer, has all the advantage; and that phase of our civilization found in a "court of justice" offers a premium on rascality as against honesty, and is a virtual failure so far as right is concerned; and if the such laws were repudiated, law books burned, and lawyers, justices and judges were contraband, and the whole thing resolved down to first pinciples, "an eye for an eye," etc., and double-barreled shot-guns, it would suit us better, for a decent man then would stand at least an equal show of getting his own, and securing justice when due.

New Game Law Needed.—There is need of a revised game law in California to favor farmers, founded upon the principles given below, which we clip from the *Rural New Yorker*; only we would qualify by allowing a farmer to destroy, during any season, such game as may be destructive to his crops. We have known quail to destroy grain and small fruits when a few doses of shot, which the law forbade, would have saved the crops and much trouble and annoyance.

The question of the right of property in game that find shelter or may breed on the premises of a farmer, or may be found on his farm, and his right to make use of it at will, is an issue that is being and to be made in the Legislature of some of the States. The sportsmen insist that the game is the property of the State, and the time and manner of killing it should be regulated by the States. Farmers —some of them at least—claim that they have the right to any game that may be found on their premises to use as they may choose and when they choose. The claim is to be urged before legislative bodies that it may be recognized. It seems to us equitable that the farmer should have the right to kill any kind of game found on his premises at any time, for his own and family's consumption as food; other than that we would restrict his privilege to destroy it in any manner at certain seasons of the year—at those seasons usually named in the game laws. Added, we would make it a criminal act for a sportsman to invade and shoot or fish upon any person's premises without the latter's consent. This is the only mode by which a man can be protected from the lawless depredations of a large class of professional sportsmen, who are as impudent and insulting as they generally are irresponsible.

Irrigation vs. Cultivation. — We frequently see something like the following extract going the rounds of the press, without qualification, calculated to deceive those who have not by practical experience in this dry climate learned better. We know that unless the land spoken of is supplied with water from some other source than what rain falls upon it, it would be impossible to grow such crops. Probably the farm spoken of is on low, alluvial soil, the subsoil of which is kept filled with moisture by the seepage of water from some stream situated above or near it (there is much such land in this State); or, it may be in a natural basin which nearly fills during overflow and holds the water in sufficient quantities to supply vegetation by capillary attraction from below during the dry Summers, (we have seen such land in New Mexico). We know that no system of farming will bring such crops every year on soil that depends solely on the rain which falls upon it during the rainy reason. Here is the article referred to:

The Los Angeles *Press* has found a man by the name of Burke who will nor irrigate his farm, though he has a chance to do so. It says: "He is one of the most prosperous farmers in the county, and for five or six years he has declined to irrigate his lands at all. He has ample facilities for that purpose, but by deep plowing, and the ordinary attention which an Eastern man bestows upon his crops, he does not need to use them. His whole hundred and fifty acres will average him every year from seventy to seventy-five bushels to the acre. He has, besides, one of the best orchards in the county, of apples, pears, peaches, etc., and none of these trees ever see a drop of water except the natural rainfall. To-day, within reach of irrigation, Mr. Burke has absolutely a prejudice against it."

San Jose Daily Advertiser.—This the name of a new paper lately started in our city. It is a small sheet, neatly printed, and deserving of success. We are disgusted with our "old dailies," and hail the *Advertiser* as a harbinger of better things to come.

Concrete Buildings.

EDITORS AGRICULTURIST:—Can you give any information in regard to concrete buildings—material to use, mode of building, etc.? About eighteen years ago I saw an account in the *Rural New Yorker* of a man's making walls in his fields of concrete. Why would it not do here where there is no freezing to injure it? Some of your readers may have had experience with it for fencing and can answer as to its utility. W. A. T.

[Will some of our readers who have the requisite knowledge or experience please answer this query?—EDS.]

Poetry.

The Untilled Land.

ALTERED FROM DUGANNE.

THE water hath fish and the land hath flesh,
And the air hath many a bird;
And the soil is teeming o'er the earth,
And fruits grow fair in many lands,
Yet millions of hands want acres,
And millions of acres want hands.

Sunlight and breeze and gladsome flowers
Are o'er the earth spread wide,
And Nature gave these gifts to men.
To all who on earth abide.
The soil lies fallow, the woods grow rank,
The tide the poor man steals,
Ah, millions of hands want acres,
And millions of acres want hands.

'Tis writ that we "should not muzzle the ox
That treadeth out the corn,"
Yet behold, ye shackle the poor man's limbs,
That all earth's burdens have borne!
The land is the gift of Nature to man,
And labor is Nature's command,
Yet millions of hands want acres,
And millions of acres want hands.

Who hath ordained that the few should hoard
Their millions of useless gold,
And rob the earth of its fruits and flowers,
While pestilless soil they hold?
Who hath ordained that a parchment scroll
Shall fence round miles of lands,
When millions of hands want acres,
And millions of acres want hands?

'Tis a glaring lie on the face of day,
This robbery of men's rights!
'Tis a lie that the face of Nature disowns!
'Tis a curse that burns and blights!
And I will burn and blight till the people rise
And swear, while they burst their bands,
That hands henceforth shall have the acres,
And the acres henceforth have hands.

To a Young Man Leaving Home.

You're starting to-day on life's journey,
Alone on the highway of life;
You'll meet with a thousand temptations—
Each city with evil is rife.
This world is a stage of excitement,
There's danger wherever you go;
But if you are tempted in weakness,
Have courage, my boy, to say "No!"

The siren's sweet song may allure you;
Beware of her cunning and art!
Whenever you see her approaching,
Be guarded and haste to depart.
The billiard saloons are inviting,
Decked out in their tinsel and show;
You may be invited to enter;
Have courage, my boy, to say "No!"

The bright ruby wine may be offered;
No matter how tempting it be,
From poison that stings like an adder,
My boy, have the courage to flee.
The gambling halls are before you;
Their lights—how they dance to and fro!
If you should be tempted to enter,
Look twice, even thrice, ere you do.

In courage alone lies your safety,
When you the long journey begin,
And trust in good moral precepts
Will keep you unspotted from sin.
Temptations will go on increasing,
As streams from a rivulet flow,
But if you are true to your manhood,
Have the courage, my boy, to say "No!"

The Two Reapers.

Two reapers toiled, their task half done,
Had reached a tree whose shade had run
Full twice its length.
With failing strength
Both cast themselves beneath.
Both gnashed their teeth
And cursed their lot:
"We toil and sweat, we sweat and toil,
And while the owner of this soil
Is blessed with plenty through our sweat,
We scarcely have enough to eat,"
Thus reasoning, one reached forth his hand
To grasp a pot.
Both took a draught. Oh, what disgrace!
The fiery stuff soon flushed their face
And temper too.
Says one: "This world is all a chance.
I'll not believe in Providence.
Through rain or shine, through cold or hot,
We toil and labor all for naught."
A zephyr passed, his voice was heard,
With tenderness her heart was stirred,
And bending low to make him hear,
She whispered softly in his ear:
"God is to you a partial Father,
While you drink rum, this farmer water!"
—[Wm. Horne.

To-Day and To-Morrow.

Awake my soul! with eager zeal
The daily task beginning;
For labor hath its pleasures real,
And dearly worth the winning.
What though with toil and care oppressed,
The day seems long and dreary?
We should not know the joy of rest
If we were never weary.
Then up! and banish sloth away,
Nor care nor trouble borrow;
For patient, earnest toil To-day
Wins triumphs for To-morrow.

What though the heedless crowd around
May greet you with their laughter?
It proves that they have never found
What we are seeking after—
The lofty joy, the pure delight,
That lights the path of duty;
That makes the earth about us bright
And life a thing of beauty.
Then up! and banish sloth away
At work-bench or in furrow;
Let others laugh at us To-day,
We'll laugh at them To-morrow.

This lesson Nature yet instills,
As well as Revelation—
That everything created fills
Some chasm in creation.
There's not a grass-blade in the vale,
Or flower that looks to heaven,
To which, could we but read the tale,
Some use has not been given.
Then up! let us of nobler clay
From these a lesson borrow;
For sloth and idleness To-day
Will bring regret To-morrow.

The meanest worm that crawls the dust,
Before its life is ended,
Accomplishes the purpose just
For which it was intended.
Think ye that man alone hath been
Placed in the world to mar it?
Shall we live, and our fellow-men
Be none the better for it?
No! let us lend a feeble ray
To light the gloom of sorrow;
For we, who prefer sid To-day,
May need the same To-morrow.

We each can make, though small and weak,
The world a little brighter.
With every cheering word we speak
Somebody's heart is lighter.
And should misfortune be our share,
With grief and pain attended,
Each pang will patience let us bear,
We know 'twill soon be ended.
Though rough and thorny be our way,
And paved with pain and sorrow—
Though we may sow in tears To-day,
We'll reap in joy To-morrow.

Don't Run in Debt.

Don't run in debt—never mind, never mind
If your clothes are all faded and torn;
Fix 'em up, make 'em do—it is better by far
Than to have the heart weary and worn
Who will love you the more for the set of your hat,
Or your ruff, or the tie of your shoe;
The style of your boots, or shade of cravat,
If they know you're in debt for the new?

Good friends, let me beg of you, don't run in debt,
If the chairs and the sofa are old;
They'll fit your backs better than any new set,
Unless they are paid for—with gold.
If the house is too small, draw the closer together,
Keep it warm with a hearty good will.
A big one, unpaid-for, in all kinds of weather
Will send to the warm heart a chill.

Don't run in debt—dear girls, take a hint;
If the fashions have changed since last season.
Old Nature is out in the very same tint,
And old Nature, methinks, has some reason.
But just say to your friends, I cannot afford
To spend time to keep up with fashion;
My purse is too light and honor too bright
To be tarnished with such silly passions.

Gents, don't run in debt—let your friends, if they want,
Have fine houses and clothing and flowers;
But unless they are paid for, be more of a man
Than to envy their sunshiny hours.
If you've money to spare I've nothing to say,
Spend your dollars and dimes as you please;
But mind you, the man who his note has to pay,
Is the man who is never at ease.

Kind husbands, don't run in debt any more,
"Twill fill your wife's cup full of sorrow,
To know that a neighbor may call at your door
With a bill you must settle to-morrow.
O, take my advice, it is good, it is true!
But lest you may, some of you, doubt it,
I'll whisper a secret, now seeing 'tis you—
I've tried it and know all about it.

The chain of a debtor is heavy and cold,
Its links all corrosion and rust;
Gild it o'er as you will, it is never of gold,
Then spurn it aside with disgust—
"I've tried it and know all about it."

Pace Implora.

BY JOAQUIN MILLER.

Better it were to sit still by the sea,
Loving somebody and satisfied—
Better it were to grow babes on the knee,
To anchor you down for all your days—
Than wander and wander in all these ways,
Land forgotten and love denied.

Better sit still where born, I say,
Wed one sweet woman and love her well,
Laugh with your neighbors and live in their way,
Be it never so humble. The humbler the home,
The nobler, indeed, to bear your part.
Love and be loved with all your heart,
Drink sweet waters and dream in a spell,
Share your delights and divide your tears.
Love and be loved in the old east way,
Ere men knew madness and came to roam
From the west to the east and the whole world wide—
When they lived where their fathers had lived and died—
Lived so loved for a thousand years.

Better it were for the world, I say—
Better, indeed, for a man's own good—
That he should sit down where he was born,
Be it land of sands or of oil and corn,
Valley of poppies or bleak northland,
White sea-border or great black wood,
Or black white winter or bland sweet May,
Or city of smoke or plain of the sun—
Than wander the world as I have done,
Breaking the heart into bits of clay,
And leaving it scattered on every hand.
VENICE, 1874.

—[Overland Monthly,

Labor.

Toil swings the axe and forests bow,
The seeds break out in radiant bloom,
Rich harvests smile behind the plow,
And cities cluster round the loom.
Where towering domes end tapering spires
Adorn the vale and crown the hill,
Stout Labor lights its beacon fires
And plumes with smoke the forge and mill.

The monarch oak, the woodland's pride,
Whose trunk is seamed with lightning scars,
Toil launches on the restless tide
And there unrolls the flag of stars.
The engine, with his lungs of flame,
And ribs of brass, and joints of steel,
From Labor's plastic fingers came,
With sobbing valve and whirling wheel.

'Tis Labor works the magic press,
And turns the crank in hives of toil,
And beckons angels down to bless
Industrious hands on sea and soil.
Here sun-browned toil, with shining spade,
Links lake to lake with silver ties.
Strung thick with palaces of trade
And temples towering to the skies,

The Plough.

Far back in ages
The plough with wreaths was crownod;
The hands of kings and sages
Entwined the chaplets round.
Till men of spoil disdained the toil
By which the world was nourished,
And blood and pillage were the soil
In which their laurels flourished
Now the world her fault despairs,
The guilt that stains her story,
And weeps her crimes amid the cares
That form her earliest glory.

The throne shall crumble,
The diadem shall wane,
The tribes of earth shall humble
The pride of those who reign;
And war shall lay his pomp away;
The fame that heroes cherish,
The glory earned in deadly fray,
Shall fade, decay and perish.
Honor waits o'er all the earth,
Through endless generations,
The art that calls the harvest forth
And feeds the expectant nations.
—[Wm. C. Bryant.

Mist.

How do the rivulets find their way?
How do the flowers know the day,
And open their cups to catch the ray?

I see the germ to the sunlight reach,
And the nestlings know the old birds' speech;
I do not see who is there to teach.

I see the hare from the dasger hide,
And the stars through the pathless spaces ride;
I do not see that they have a guide.

He is eyes for all who is eyes for the mole;
All motion goes to the rightful goal.
O, God! I can trust for the human soul.
—[Chas. G. Ames

Between two evils choose neither.

ABOUT THE SEASON.

The failure of our usual Spring rains has brought a veritable drouth upon the country, notwithstanding the early promise of an abundant harvest. Early sown grain that had the advantage of a good root growth while the Winter rains prevailed, are the only fields that have succeeded on dry lands and under ordinary treatment. Only a few fields of late sowed grain have done well, and only such fields as received extra tillage, or were put in on land that had been previously in pasture or summer-fallow, did well sown late.

Old Californians think another series of dry seasons has commenced. Every sign points that way, and it is about the time in a decade of years for such an occurrence. It is well, at any rate, for every farmer to make calculations for such an event.

To such as are fortunate to have farms upon low lands but little need be said. They will profit by the failure of those whose farms are high and dry, by getting better prices, etc. But, to farmers who are cultivating dry ranches, we offer a few suggestions. Do not calculate upon putting the whole farm in grain, but only such portions as you may have reason to believe will stand the best show of producing some crop should the season be dry. That portion which you propose to leave for volunteer and pasture, it would be well to harrow over thoroughly, and cross-harrow again, as soon as convenient to do so. A mulching upon the surface, such as the dry earth would make by harrowing, would tend to prevent the further evaporation of moisture from the soil, and the moisture from a great depth below the surface would diffuse itself equally under the harrowed surface, so that when the first rains would sprout the seed it would have a better chance to take root and grow. Even such land as you intend to plow and seed next Fall, it would be a good plan to harrow in this way, for reasons above given. Of course, where the stubble is now of much value for pasture, it would not be economy to destroy it. But there is much land on almost every farm that will not be pastured to any paying extent. We strongly advise every upland farmer to make plans to summer-fallow a portion of his land next season.

HARVEST CLOSELY.

As to harvesting grain this season, we would advise skimming as closely as possible, where it is light. Make seed and feed for yourselves if you can. We know of some farms in our Santa Clara Valley that will have hard work to yield that much this season. Save, also, all the hay and straw possible. Don't lose a straw if you c n help it.

NOW A WORD ABOUT STOCK.

Make plans to fatten and sell or put into the barrel this fall every second-class beef animal you can spare from the farm. Leave none but the best cows and other most valuable animals to keep—none but what you know your farm can safely carry over a hard year or two. You may think that taking a scare before you are hurt is a poor principle; but even if it is a good season next year, such a thinning out will not be bad, for you can then purchase some better animals to take their places, which will always pay in the long run anyway. *Apropos* to this subject, we quote from the *San Mateo Gazette* some interesting facts and suggestions:

The meteorological records of the State prove that California has experienced seasons of drouth which have been terrible in their results. They have occurred at long intervals of time, before as well as since the American occupation. They entailed no loss of human life, so far as we are aware; but vast herds of horses and cattle were lost. In some years the grass crop entirely failed, and thousands of cattle were killed for their hides and tallow, the carcasses being left on the plains for the vultures and coyotes.

Don Andreas Pico, an eminent native Californian living near Los Angeles, during various years of drouth prior to 1851, drove thousands of wild horses over cliffs a hundred feet high into the sea. In those years the crops totally failed for the want of rain, and the California rancheros were compelled to destroy their horses in order to save as much pasture as possible for their vast herds of cattle. But even this expedient often failed to save their stock of sheep and cattle. They perished by thousands for want of the life-giving water. Much suffering ensued among the people. This country was then sparsely settled. When its rising population approximates to the millions, as it surely will at no distant day, we can readily see that the occurrence of one of the long drouths peculiar to California would be attended with disastrous results. It has sometimes happened that for one, and even two, years no rain has fallen in California. Suppose that such a thing should happen next year or in 1877; our wheat exportation would cease and agriculture receive a blow from which it would take a long time to recover. All our great interests would suffer a temporary paralysis, and millions would be lost our young commonwealth.

IRRIGATION NEEDED.

"Necessity is the mother of invention," and this contingency of a drouth, which has so often happened here, ought to stimulate our inventive genius and induce us to devise some method of general and permanent irrigation—something that will make us independent of the capricious elements, and secure for us and for coming generations an unfailing supply of pure water. The Legislature ought to invite from our citizens plans and specifications for a general system of irrigation; with the understanding that a prize of money shall be paid by the State to the person whose plan is approved and adopted. This would bring men of inventive talent into the field, and would secure for the successful proprietor a fame more indestructible than silver and gold.

Irrigation is a subject that is now claiming a good deal of attention in some portions of the State, but much more is required to be said on the subject. There are many places so situated that a copious Summer irrigation would be impossible, without an immense expense, where

WINTER IRRIGATION

would pay, and could in all ordinary seasons be practiced. We know of many farms in our valley that might have been soaked with water last Winter, and would have had good crops, where now but little either of hay or grain will be cut. In riding through these districts we notice that along the side of roads and in little sags where the water settled in and soaked the soil, that the grain stands high and looks first-rate, while the rest of the fields are dried up, without heads, and not over six inches high. This shows conclusively that a little more water, or at least a plenty of water during the rainy season, would have insured the crops. It is very poor soil that will not make a good crop if it is once thoroughly soaked with water. We feel more than confident that if the farmers of our State fully appreciated the advantages that must follow Winter irrigation, they would not rest until every little stream that runs across our valleys was led upon the lands until they were filled with water and good crops insured.

The fertilizing materials that would be deposited upon farms in this way from the wash and drainage of mountain lands would keep farms thus watered perpetually fertile, and alone well pay the trouble and expense of such a system. Can any farmer dispute this point?

THIN SOWING.

Our attention was called by a practical farmer to one little fact which is worth the consideration of all grain raisers. We saw spots in a dried-up field where the grain run up and looked as though it would make good heads, that could only be accounted for by being seeded thinner than the rest. There were not so many stalks to sap the moisture, in other words, were less to divide the moisture between, and consequently each one had more to itself than where the grain was thickly sown. This thing the same gentleman has noticed for several years, and asserts that thin sowing for dry seasons is the thing. It takes less than one half the seed usually sown, not so much expense on a risk, and even if the season should be a wet one will stool out if sown early so as to produce about as much as if sown as thick as usual. When dry, thin sown does not stool out much, but makes full heads when thick sown grain would dry out completely.

One thing more, which we have often repeated already: remember that *thorough* surface cultivation is needed to withstand the effect of drouth in our dry climate.

Deadly Insects.

The buffalo gnat is credited with occasioning a wide-spread mortality among the horses and mules of east Tennessee. Many farmers have lost all their stock at a season of the year when they can least afford to do without them. The bite of this insect seems as deadly as that of the African tsetse, the pest of all travelers in Africa. Man and wild animals appear to be invulnerable to the tsetse, but camels, dogs, oxen and horses cannot long survive its attacks. In one expedition Dr. Livingstone lost forty-three oxen from this cause. He was inclined to believe that the ass was bite-proof, but the experience of his last journey convinced him that he was in error. The donkey, though not so susceptible as some of the other animals above mentioned, still succumbs to the little brown fly with yellow stripes. Its proboscis pierces the skin of its victims, and draws thence a plentiful supply of blood. No special harm at first seems to have been done, but in a few days the eyes and nose of a bitten animal begin to run; a swelling makes its appearance under the jaw; the muscles grow weak, and finally the digestive organs are disordered and death soon follows. When dissected, the cellular tissue under the skin is found to be injected with air, as if soap-bubbles were scattered over it. We have not received full details of the operation of the Tennessee insect, but whatever it is, its ravages are quite like those of the tsetse.—*Cincinnati Gazette.*

He that composes himself is wiser than he that composes books.

AGRICULTURAL AND GRANGE MATTERS IN THE SOUTH.

Any reliable intelligence of the agricultural condition of the Southern States we regard with interest. California seems more nearly related, in resources, climate and productions to the South than to the North. The South has depended for success upon growing articles for export, and California tends to the same direction. The consequence to the South of the one-crop system has been most disastrous, and her only salvation is to inaugurate a more diversified system of agriculture, and this her people are not yet educated up to. They know nothing but cotton, as many of our farmers know nothing but grain, and they purchase from the Northern States the common necessaries of life, which they might with economy produce at home. While divided by distance and non-communication they were also subjects of sharpers in the shape of cotton speculators. The Grange will remedy this matter to a great extent, and in meeting together, discussions upon farming matters will gradually educate the farmers to adopt and follow a diversified and more practical and economical system of agriculture.

J. W. A. Wright has just written a good letter from the South to the San Francisco *Chronicle*, on Grange matters in the South, from which we select the following:

In the Southern States generally, there is no question that the Grange, in its many subordinate and State organizations, is greatly advancing the interests of agriculture by the practical accomplishment of some of its noblest purposes. Throughout the Southern States more than ten thousand subordinate Granges—nearly half the number in the United States—are combining all agriculturists in all the fraternity and strength of our Order for the protection of those interests of agriculture which are common to every State, regardless of any partisan or sectional differences.

Not only is their real community of interests more fully discussed and understood—not only is more complete social enjoyment secured, but the fields are more carefully fertilized and more thoroughly cultivated. The harmonious and sympathetic work of the Grange throughout the Union has given our Southern brothers generally new-born hopes for "a better day coming." And surely they need that better day as few farmers in the world can need it. The chief business enterprise into which they have been led by the principles of the Grange is a combined movement in Georgia, South Carolina and Alabama, in which other cotton States will no doubt soon join, for direct shipments of cotton to Europe by the Granges. Southern cotton buyers have been paying better prices the past Winter than formerly. This is no doubt to be accounted for chiefly by two facts—this movement toward direct shipments and the decreased number of bales raised last year, the crop of 1874 in the cotton States being now placed at about 3,600,000 bales. This latter fact is also due in great measure, as is well known, to the Grange work; for Southern farmers generally adopted the advice given them by the St. Louis meeting of the National Grange, to plant less cotton and more corn. So there is no doubt of the favorable influence of the Grange, directly and indirectly, in securing better prices for cotton growers the past season. They have also, as a general rule, been paying less for the transportation of their produce to market, and been receiving greater accommodation from commercial men, many of whom here, as everywhere else, bless the Grange—over the left—with a slight gritting of the teeth, while ready to admit that it will be a great benefit to farmers, so long as they are true to its purposes and restrain themselves within proper bounds.

In Alabama, where almost every farmer is a Granger, the State Fair next October will be conducted under the management of a committee of the State Grange. Premiums are offered which must tend materially to improvement in systems of culture. No American citizens rejoice more at the growing "era of good feeling," are more patriotic, or more willing to do everything in their power to aid in bridging over, sincerely, effectually and forever, the "bloody chasm," than are the Grangers of the South. It is only necessary "to meet them half way."

As I came through Tennessee, where you know there are now over one thousand subordinate Granges, I met with some prominent members of our Order in that State. They assert that the purposes of the Grange are working out the same benefits for farmers there as in other States. One little special item for which the Grangers have credit there is the securing of a small and apparently insignificant act of their Legislature last Winter in the interest of sheep-raising. It is nothing more nor less than a "dog-law." It fixes a fine of five dollars on one kind of dog, and one dollar on another kind. Collectors of the poll-tax are expected to collect the dog-tax. If the owner of a dog refuses to pay the tax the collector is required to kill the dog at once. This law and its provisions will go far toward freeing the State from sheep-killing dogs, for it will not pay to keep any but good dogs, and if properly enforced it can at least make sheep husbandry profitable. Just such a law is needed in Alabama, Mississippi, Maryland and other Southern States, for, beyond question, there is excellent sheep range in all of them, as well as in Tennessee. If you say to Southern farmers, "You have fine range, why don t you raise sheep?" they reply, "Too many sheep-killing dogs, and we can't get a dog-law." Strange as it may seem, a dog-law is one of the hardest to have passed in many States. Legislators have even been known to urge that if they passed a dog-law it would ruin their party. Strange, isn't it? Still it is true. Now in Tennessee the Grangers have set an example that should be followed in other States. Grange petitions were sent in to the Legislature asking for a dog-law—as much as to say the interests of agriculture demand such a law, and we want it regardless of party differences and dangers. Their Legislators, like wise men, heeded the appeal, and, relieved of all anxiety about the dear party, passed the law, thus paving the way for a great addition to the agricultural resources and wealth of the State.

This single instance contains, as it were, in a nutshell, the principle of Grange influence in legislation, state and national—or a part of its political influence, if one chooses to call it so—for, beyond question, the Grange has a political influence for good, and a powerful one, although it does not propose to dabble in partisan politics nor interfere in the least with the party affiliation of its members.

There are many laws and measures which tend to protect and foster especially our agricultural interests. A part of our Grange work is to discuss and find out, in the harmony and secrecy of the Grange-room, what are such laws and measures. When, by common consent, we find such laws and measures clearly and certainly, it is then the right and purpose of all Grange members, by joint petitions and all other legitimate means, to influence our Legislatures and Congress to pass enactments necessary to secure these general and evident interests. This seems to be a point very much misunderstood in regard to our Grange work. By bearing these facts in mind many acts of the National Grange at its Charleston session can be better understood and properly appreciated by some of our members as well as outsiders.

Little and often fills the purse.

INTERNATIONAL EXHIBITION AT PHILADELPHIA, 1876.

Circular of the Bureau of Agriculture.

The Centennial Commission, realizing the importance of the agricultural interests of the United States, and anticipating the demands that will be made for a proper representation in the International Exhibition of 1876, is making ample provision for the accommodation of this department.

It has been organized as one of the bureaus of administration of the Exhibition, and will comprehend the native and cultivated products of the soil, and of objects more directly derived therefrom, agricultural machinery and farm appliances.

The building, most eligibly located in Fairmount Park, will cover ten acres. There will be provided, also, ample and suitable accommodations for the shelter and display of live stock, which it is intended shall be exhibited during the months of September and October.

The Exhibition will open on the 10th of May, 1876, and it is therefore necessary that those who desire to exhibit cereals, forage-plants and tubers should make their preparations during the present season.

This exhibition being international, will bring together for comparison the best products from every quarter of the globe; hence every effort should be made to give just evidence of the capacity of the varied climates, soils, skill in tillage, and the character of the live stock of the United States; whilst the mechanical aids to agriculture should exhibit ingenuity, excellence of workmanship, and adaptation to desired ends. The classification will more fully make manifest the arrangement and comprehensiveness of this department. Applications for space should be made as early as practicable, on forms which will be furnished by the Chief of this bureau.

The prompt co-operation of state, county and other agricultural organizations, as well as of all individuals interested in the practice of rural science, stock-breeding and forestry is earnestly solicited.

COMMITTEE OF THE CENTENNIAL COMMISSION ON AGRICULTURE.

Robert Lowry, N. C. Meeker,
Lawrence Weldon, Robert Mallory,
Eldridge W. Little, Archibald Cameron,
Andrew J. Dufur.

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A. L. Kennedy, M.D., Paschall Morris,
Charles R. King, M.D., Wm. B. Roberts,
John R. Eby, Lewis Weldin,
George Blight, William Brice,
Thaddeus Norris, George I. Young,
Chas. L. Sharpless, John I. Bishop.
Samuel C. Willetts,

Burnet Landreth,
Chief of Bureau of Agriculture.

A. T. Goshorn,
Director General.

LIVE STOCK AT THE CENTENNIAL.

It is understood that the Centennial Commission has concluded to have the live stock display at the International Exhibition, within the months of September and October, 1876; the periods devoted to each class and family being fifteen days, and the division as follows:

Horses, mules and asses (as one class), from September first to fifteenth.

Horned cattle (of all varieties), from September twentieth to October fifth.

Sheep, swine and goats (as one class), from October tenth to twenty-fifth.

Poultry will be exhibited as a permanent and also as a temporary show, the first commencing on the opening of the Exhibition, the latter from October twenty-fifth to November tenth.

Animals must be of pure blood to be qualified for admission (trotting stock, fat and draught cattle excepted), and even those of pure blood must be highly meritorious.

The exhibition being open to the whole world, it is of the first importance that we bring forward the best of their kind only, as the character of our stock will be judged by the general average of those exhibited.

Exhibitors will be expected to provide for feeding their stock.

All forage and other food will be furnished at cost prices at depots conveniently located within the grounds.

Exhibitors will also be expected to furnish their own attendants, on whom all responsibility of the care of feeding, watering and cleaning the animals, and also of cleaning the stalls will rest.

Though the Commission will erect ample accommodation for the exhibition and protection of live stock, contributors who may desire to make special arrangements for the display of their stock, will be afforded facilities, at their own cost.

All animals will be under the supervision of a veterinary surgeon, who will examine them before admission to guard against infection, and who will also make a daily inspection and report.

In case of sickness, the animal will be removed to a suitable enclosure, specially prepared for its comfort and medical treatment.

Rings will be provided for the display and exercise of horses and cattle.

It is highly important that all who design exhibiting should now make application, as the extent of preparation necessary can only be regulated by an estimate based upon actual demands.

Inquiries may be addressed to the Chief of the Bureau of Agriculture, Philadelphia.

AGRICULTURAL MACHINERY.

The Centennial Commission is making thorough provision for the reception and display of agricultural machinery and implements.

A section of the agricultural hall, an imposing structure covering ten acres, will be set aside for the exhibition of farm appliances, and it is anticipated that this feature will be second to none in the agricultural department of the International Exhibition.

It will be evident to the manufacturers of agricultural machinery that as this our national exhibition, is also open to the competition of the whole world, which has been invited to participate, our past progress and present position will be closely scrutinized, and we shall be judged by the general average. Therefore, the admission of any object will be granted only when it possesses a character of unquestionable worth, and in the case of machinery, under the ruling of the Commission, the elements of merit are held to include considerations relating to "originality, invention, utility, quality, skill, workmanship, fitness for purpose intended, adaptation to public wants, economy, and cost."

Within the agricultural hall will be steam power, and all the necessary appliances for driving all such machinery as cotton gins, sugar presses, plantation mills, threshers, fanning mills, etc.

It is contemplated to test in the field, plows for animal and steam power, reapers, mowers, tedders and hay rakes.

Manufacturers, designing to compete in the field will be required to use the same machines as they offer on exhibition.

The reception of articles within the hall commences on January 5th, 1876, and ends on April 19th, the exhibition opening on May 10th, and continuing six months.

Inquiries may be addressed to the Chief of Bureau of Agriculture, Philadelphia.

POMOLOGY.

It is the purpose of the Centennial Commission of the International Exhibition, and an especial object of interest to the Bureau of Agriculture, which has been charged with the reception of fruits for exhibition, to afford every inducement and facility for a full and complete display of the fruits of our varied climates, and also those of more northern and tropical regions.

It being questionable as to the practicability of exhibiting many perishable fruits, the products of the tropics, models in wax and plaster will be acceptable.

Such a display of pomological products as herein designated will, it is expected, cover the entire period during which the Exhibition will be open, though at all times varying in importance and extent. For instance, berries and other small fruits will be included in this department, and of these there will be certain classes, as strawberries from the South, ready for exhibition on the opening day; and the variety and quantity will be presented in an increasing scale as the season advances.

It will be perceived readily that the most important display will be made during the months of September and October.

The classification, and arrangement of location of fruits sent for exhibition, will be according to their species and variety; all of similar character being assembled together, that a more satisfactory conclusion may be reached as to the respective merits of like products from different soils and States; thus all grapes, from whatever source, will be placed in one position; the same with apples, pears, and the entire list of cultivated and wild fruits, and nuts.

Exhibitors may be assured that the proper arrangements will be made for the united interests of themselves, and pomological science.

It is hoped that the pomological societies of the several States, and individual cultivators generally, will co-operate in an effort to place before the world creditable evidence of the resources and capacity of our country in respect to fruit culture and products.

The Exhibition will open in Philadelphia on the 10th of May, 1876, and close the 10th day of November following.

FORESTRY.

The Bureau of Agriculture of the Centennial International Exhibition, to be opened in Philadelphia, May 10th, 1876, comprises within its department a display of all the products of the forest, both in primary and secondary form.

It is earnestly requested by the Commission that foresters of all sections of the Union forward samples of the trees of their respective districts. These samples or specimens may be presented in any convenient and portable form; as, for example, it is suggested that the bark of one or more of the giant trees of California (Washingtonia gigantea) be taken off the trunk in segments and sections, to be placed on arrival on a skeleton frame of the same dimensions as the original. The agricultural hall having an extreme elevation of seventy-five feet, will afford ample room for at least a partial exhibit of one of these monsters of primeval forests. Thus also with other trees of the Pacific coast, hardly secondary to it, as Abies Douglasii and nobilis, Librocedrus decurrens, Pinus Lambertiana, The White Pine and Hemlock of the North, The Yellow Pine in their several species, the Live Oak, the Cypress (Taxodium distichum) of the South, and a long list from every section of our broad territory.

In addition to specimens of trunks of trees should be exhibited timber and lumber in all forms; as samples of masts and spars, large and small; knees and square timber, as prepared for naval purposes; planks and boards exhibiting unusual breadth and character of cell and fibre. In brief, every description, quality, and form of wood used in construction and decoration.

Foreign specimens are confidently expected —let us not fail to place ours side by side with them.

It can hardly be necessary to add another word. The lumber interests of this country are too important not to be fully represented at the International Exhibition. Few of us, it may be assumed, comprehend and appreciate the lumber resources of the Union, and we can only do so by such an exhibit as is herein proposed, and by the study of statistical tables expressive of value, now in course of preparation.

Communications in connection with this and kindred subjects, may be addressed to the Chief of the Bureau of Agriculture.

HOW SHALL WE CELEBRATE?

As the annual return of our national birthday is so near at hand, perhaps it will be well to say a word in regard to the way in which it should be celebrated. There has been a tendency, for the last few years, to ridicule and burlesque the day, more than to celebrate and honor the act or our patriotic and noble forefathers who risked their lives and fortunes in giving us the Declaration of Independence that spoke our nation into existence. This is not as it should be. Then let us see to it that the coming Fourth of July shall be celebrated in a manner that will not only show our gratitude and thanks to our worthy sires, but that will have a tendency to elevate and refine the rising generation. Is there a man, woman or child, with one drop of true, patriotic blood in their veins, that did not feel insulted and disgraced by the caricatures of Miss Sallie Hart and other temperance workers which were paraded through the streets of San Jose on last Fourth of July? just because she had been brave and true enough to try to stay the tide of intemperance that is not only blighting the prospects of our lovely city, but has proved the greatest curse the world has ever known, even as our forefathers worked against oppression. Parents, "be not deceived; whatsoever ye sow, that shall ye also reap." If we do not provide public entertainment that will elevate and refine the young, that will lead them to a higher phase of civilization, we must not complain if they find and are demoralized by entertainments of the descending phase of civilization; and if we permit decency to be insulted and patriotism to be dishonored upon our streets on our natal day, what must be the result?

Why Ears Should Not Be Boxed.—In *Physiology for Practical Use* (D. Appleton & Co.) we find the following:

There are several things very commonly done which are extremely injurious to the ear, and ought to be carefully avoided. * * And first, children's ears ought never to be boxed. We have seen that the passage of the ear is closed by a thin membrane, especially that adapted to be influenced by every impulse of the air, and with nothing but the air to support it internally. What, then, can be more likely to injure this membrane than a sudden and forcible compression of the air in front of it? If any one designed to break or overstretch the membrane he could scarcely devise a more efficient means than to bring the hand suddenly and forcibly down upon the passage of the ear, thus driving the air violently before it, with no possibility for its escape but by the membrane giving way. Many children are made deaf by boxes on the ear in this way.

SOMETHING ABOUT THE BEET. SUGAR INTEREST.

The beets look well and promise a good crop at Soquel, Santa Cruz county. At Sacramento and at Davisville the prospects are equally good. There are but two sugar mills in the State. We have now had four years' experience in this interesting branch of industry, and it is well proved that we can make sugar from beets in California at 7 cents a pound, including every expense. A reduction to 6½ cents is expected, by letting farmers raise the beets. They can make acceptable profit, delivering beets at $5 a ton, on long contracts.

In Europe, sugar-making from beets is a favorite industry, because of its certain profits. We have great advantages over Europe. Our longer season ripens the beet better and increases its weight. Our milder Winters save two-thirds of the expense of storage, and all other items are in our favor. The free raw sugars of the Sandwich Islands do not affect us materially. With this favorable showing we regret to find a disinclination to go into the business. A gentleman who owns a large farm, and has suitable buildings and water, all accessible to our bay craft, has presented to men of capital an offer so inducing as to tempt any one, if there were not a general apathy toward all industries.

He offers to build works equal to Sacramento for $75,000. Then a working capital of $25,000 would make the investment $100,000.

He does not propose buying land, nor farming beets. Rich farmers will take long contracts to furnish beets to the mill for $4 50 per ton.

He offers to take, and pay for in coin, ten per cent. of the stock; and further, he will guarantee 25 per cent. profit on the investment in the first year, if he be allowed to direct the management for the year. For this guarantee he will accept the surplus over 25 per cent. He will put up security for this.

Every man is interested in encouraging manufacturing here. Nothing seems to insure a higher profit, and with every security against risk. We, therefore, earnestly entreat for this proposition the serious consideration to which it seems entitled.

The foregoing is from the *Alta*. When we take into account the value of the

PULP FOR STOCK,

as well as the juice for sugar, the above calculation will not seem wrong. We excerpt the following in this regard:

After the juice is expressed from the rasped beet, the dry pulp remaining is an admirable food for cattle, sheep, swine, or fowls, of which vast numbers are fed in the sugar-producing districts of Europe. The average amount of pulp is 20 per cent. of the original weight of beets, and it is almost a universal custom for farmers to contract with manufacturers to receive back in pulp 20 per cent. of the weight of beets furnished. For this the farmer pays two to two and a half dollars per ton. If the manufacturer has any pulp remaining after his contracts with the farmers are filled, he sells it to others at two dollars and seventy-five cents to three dollars per ton.

Repeated experiments have proved that for feeding stock, three tons of pulp are fully equal to one ton of the best hay. Cattle are fond of it, and by its use are fattened for the market in one hundred days.

The method of feeding stock upon it employed at Masny, by the Messrs. Fievet, the model farmers of France, was the following:

Each ox was allowed daily 80 lbs of pulp, 5 lbs of chopped straw, 5 lbs oil cake. Each cow had daily 70 lbs of pulp, 5 lbs of chopped straw, 5 lbs oil cake. Each sheep was given daily 6 lbs of pulp, ½ lb of chopped straw, ¼ lb of oil cake, and 1 lb of chaff.

They fattened in this manner 800 head of cattle and 4,000 sheep every year.

The Messrs. Fievet recommended the use of chopped cornstalks and a small quantity of Indian meal for the Western United States.

Chaptal says of the pulp: "This food is almost dry; it has not the advantages of roots or grasses, nor of dry forage. It does not ferment, and is not laxative, like the former, nor does it heat and produce constipation like the latter. It contains almost all the nutritive principles of the beet."

In fact, water is the chief article taken from the beet by rasping and pressing, and there still remains from four and a half to six and a half per cent. of sugar in the the residuum, besides other nutritious matter.

Dombasle recommends it, especially for sheep, and also for milch cows, stating that the quantity as well as the quality of the milk and the color of the butter are much improved by its use.

M. Cail, the wealthy and enterprising owner of "La Briche"—a splendid farm in the department of Indre et Loire—mixes his pulp with chopped straw, in the proportion of five-sixths of the former to one-sixth of the latter. To the oxen, for fattening, he gives 150 lbs of this mixture in the Winter months; to milch cows, 110 lbs; and to working-cattle from 100 to 150 lbs daily.

A liberal daily allowance for an ox is 75 lbs, for a cow 60 lbs, and for a sheep 6 lbs, with chopped straw, and a little oil-cake, or meal. Consequently, if a farmer raises 100 tons of beets, and takes back from the manufacturer 20 tons of pulp, he has the means of feeding, during the five months from the first of November to the first of April, 4 oxen, or 5 cows, or 60 sheep. The manufactory that consumes 24,000 tons of beets provides 4,800 tons of pulp, with which may be fed, for the five most costly months of the year, when there is no pasturage, 960 oxen, or 1,200 cows, or 12,000 sheep.

EFFECT OF SUBSIDIZING THE BEET SUGAR INTEREST IN FRANCE.

In the days when England took a much more active interest than she does now in the "balance of power" in Europe, France began to cultivate beet root, and make therefrom her own sugar. By prohibitory taxes on foreign sugars, an abnormal growth was given to the manufacture of beet root sugar, and in time the supply was in excess of the demand, so that the branch of industry became less and less profitable. To obviate this, France offered an export bounty on sugar, so that on every $100 worth exported the French merchant got possibly $10 allowed him by the Government, and he could therefore afford to sell his goods for $90. The result has been that the French sugar makers have been underselling the English in the markets of England, and the English sugar-makers have now applied to their Government to equalize matters by imposing a tax on French sugars equal to the export premium allowed by the French Government.

The Trespass Law.—We have reliable information that the cattle men in this Senatorial District are actively engaged in laying their plans to elect Representatives this fall of fence proclivities. It is very evident the contest on this subject is not yet ended. They will leave no means unturned, if not to repeal the law altogether, to so modify it as to be of little practical benefit. The good that has resulted from the Trespass Act of the last Legislature, defective as it may be in some respects, has exceeded the expectations of the most sanguine of its friends. It has been the salvation of this valley. All the great and almost magical changes of the past year are due to it, and those that will take place next year, if this law is not tampered with, will be still greater. Let everybody, then, interested in the maintenance of the Trespass Law (and this class comprise more than nine-tenths of our people) be careful who they support for Representative. The agents of evil are always active. Eternal vigilance is the price of safety.—*Kern Courier.*

Educational.

Parts of Speech.

THREE little words you often see
Are articles—A, AN and THE:
A noun's the name of anything,
As school, garden, book, or swing;
Adjectives tell the kind of noun,
As great, small, pretty, white, or brown;
Instead of nouns the pronouns stand.
Her head, his face, your arm, my hand;
Verbs tell of something to be done,
To read, count, swing, jump, or run;
How things are done the adverbs tell,
As slowly, quickly, ill, or well;
Conjunctions join the words together,
As men and women, wind or weather;
The preposition stands before
A noun, as in, or through, a door;
The interjection shows surprise,
As Oh! how pretty—Oh! how wise;
The whole are called nine parts of speech,
Which reading, writing, speaking teach.

Pupil Farmers.

The *American Agriculturist* has some sensible remarks under this head. Are there not some farmers, nurserymen and fruit growers in California who would like boys and young men as apprentices? We know there are a number of likely young fellows who would gladly take situations where the could work and have educational advantages, physical and mental. We would freely and without price publish the names of those who want boys, and of boys who want situations. We would gladly make the California Agriculturist a medium for such intelligence. Send in the names and qualifications. The *American Agriculturist* says:

The old system of apprenticeship had its merits. Although shorn of its ancient usages and bonds it exists to a great and useful extent to-day. That it is gradually coming into use upon the farm is a proof that farming is attaining the rank of an established business in the full significance of the term. Anciently the weaver or "webster," the butcher, the skinner or "fletcher," the smith, the tailor or "taylor," and other tradesmen taught their sons their trades as they gave them their names, and the trade became the property of the family as much as the name. No stranger intermeddled with their trades. Such competition was rarely permitted. But society has outgrown this state of things, and the son, not bound by the ancient tyranny of a parental despotism, leaves the farm for other employments. As he quits the farm so other boys leave their homes and seek the farm, or they would do so if opportunities were presented to them. Such opportunities it was hoped would be presented by the agricultural colleges, but that idea has not yet been realized to any extent. The only resource for such youths or young men is to become pupils of some successful farmer, and learn their business or trade in a thoroughly practical manner, without being hampered with studies for which they have no use. In England and other countries the agricultural journals contain numerous advertisements from farmers who want pupils, and young men who desire to become pupils, and the same system is already originating here. Not long ago a case in which we were the means of bringing master and pupil together, has resulted so satisfactorily to both parties that we recommend its repetition in other instances. Doubtless there are many successful farmers who would receive pupils, and hundreds of young men who would gladly seize upon an opportunity of becoming pupils to such farmers. We so very frequently receive applications from young men desiring to learn stock farming or dairy farming in the West, or general farming in the East, that it would be of great service to them should those farmers [or dairymen who desire to receive pupils make it known publicly through the columns devoted to business matters. But none should enter upon this work unless entirely competent.

Correspondence.

An Alarming Habit and Custom.

EDS. AGRICULTURIST: A London correspondent of the San Francisco *Chronicle* alludes to the curious custom of women frequenting bar-rooms with the same freedom as men. Respectable-looking women, with their prayer-books, stop on their way from church, call for whatever drink they like, and enjoy it with a cracker. In hiring a servant, too, the custom prevails to agree to furnish a certain amount of beer daily, or to pay them a stipulated sum as beer money.

A mass-meeting was held on Ash Wednesday in one of the theatres to discuss the propriety of opening museums and other places of amusement on Sunday in order to win people from the drinking saloon or public house. One speaker argued that it was impossible to induce the people to give up any enjoyment without offering another in its stead.

Can it be possible that the opening of places of popular resort for amusement will lessen the sale of stimulating drinks? The one calls for the other; and in a country where both sexes patronize the bar, surely they would not pass them by without their patronage in going or coming from the museum or other place of amusement.

We Americans should be charitably inclined towards those whose taste for fermented or spirituous liquors comes to them from both father and mother for generations. Our duty here in cosmopolitan California should be to help the dear children of such parents to overcome their inheritance, which is often a source of grief to the parents, but which they find it impossible to cure in themselves.

SANTA CRUZ, May, 1875. NELL VAN.

[We also ascertain on good authority that ladies in San Francisco are learning to smoke tobacco as a fine accomplishment, and say that it is "the thing" in the *elite* of society! What next? Ladies drinking and smoking like men! Well, if it is good for men it ought to be good for women and children. Who is setting the example?—EDS.]

ARTESIAN WELLS.

Do They Drain Our Higher Lands?

EDS. AGRICULTURIST AND LIVE STOCK JOURNAL: That artesian wells are of great local benefit cannot be doubted; but whether they are not injurious to at least those parts of land in the vicinity which cannot be irrigated by them, is, and must be, a question of sufficient importance to be worthy the serious consideration of the agriculturist.

To assist in this inquiry, it will be necessary to compare the nature and productions of those parts of Santa Clara valley called high and dry lands before artesian wells came into existence with what they are now. It is well remembered by many of us when those lands produced all kinds of vegetables, particularly potatoes and onions of the largest size: beans, corn and melons planted in June or July produced excellent crops. Some say that the change came through exhaustion of the soil, but the farmer knows that new and rich spots are equally unproductive of anything but grain. We also remember when the and along the Alameda was so swampy even in the Summer months as to be nearly unfit for cultivation, and we further remember that in those times the very dryest soil, when pulverized in midsummer, soon became moist enough to sprout most kinds of seed. Now soil well prepared by flooding will dry out before the little plants are large enough to permit irrigation. This, of course, is not so on those low portions of the valley where all the upper waters must collect and press to the surface, while those higher parts, even with artesian wells, have certainly undergone a most decided change in their productiveness. Have the cereals escaped the effects of that change? and what can be the cause? I do not know; but I must be allowed to surmise, since I am willing to give my reasons. They are this: that no amount of rain would be sufficient for vigorous plant-life without moisture through capillary attraction from those streams and veins coming and running underground from the highest mountains towards the sea, where they have no outlet, and must stand and press upwards, or find vent by forming springs, by which means they perform their natural duty and become of universal benefit. But where they must exhaust themselves through so many openings as our artesian wells give them, their pressure must cease, and capillary action becomes impossible, and dryness and barrenness, to a greater or less extent, must be the result.

Now, if my theory is accepted, then artesian wells must be considered as a great general evil, and we must be allowed to request the CALIFORNIA AGRICULTURIST to suggest a remedy.

SAN JOSE, May, 1875. K.

Apiary.

The Hen and the Honey-Bee.

BY JOHN G. SAXE.

A LAZY Hen—the story goes—
Loquacious, pert and self-conceited,
Espied a Bee upon a rose,
And thus the busy insect greeted:

"Say, what's the use of such as you,
(Excuse the freedom of a neighbor!)
Who gad about and never do
A single act of useful labor?

"I've marked you well for many a day,
In garden blooms and meadow-clover—
Now here, now there, in wanton play—
From morn to night an idle rover.

"While I discreetly bide at home,
A faithful wife, the best of mothers,
About the fields you idly roam,
Without the least regard for others.

"While I lay eggs and hatch them out,
You seek the flowers most sweet and fragrant,
And sipping, while, stroll about,
At best a good-for-nothing vagrant!"

"Nay," said the Bee, "you do me wrong;
I'm useful, too; perhaps you doubt it,
Because—though toiling all day long—
I scorn to make a fuss about it.

"While you, with every egg that cheer.
Your daily task, must stop and hammer
The news in other people's ears,
Till they are deafened with the clamor.

"Come now with me and see my hive,
And note how folks may work in quiet;
To useful arts much more alive
Than you with all your cackling riot."

L'ENVOI.

The Poet, one may plainly see
Who reads this fable at his leisure,
Is represented by the Bee,
Who joins utility to pleasure;
While in this self-conceited Hen
We note the Poet's silly neighbor,
Who thinks the noisy "working-men"
Are doing all the useful labor.

Bee-Keeping for Women.

The rearing of the honey-bee, the making of honey and beeswax, is now becoming one of the established occupations of many practical business men, not only in our own country but in foreign countries, who devote themselves entirely to the work, and are making it not only a practical but a scientific occupation. And not only men but women are taking much interest in these scientific and practical researches. There are many women who, within the last few years, have not only added to their store of pin-money, but have gained much useful knowledge, beside enjoying a pleasant out-door exercise, by raising and tending bees. But in order to become a successful apiarian it is of the greatest importance to be a lover of bees, for no business pays that a person has not interest enough in and a love for, to attend to it properly. No doubt many fail in their attempts to raise bees from the fact that they are not properly located; for bees, in order to do well and store large supplies of honey, must have a good supply of honey-producing trees and plants within short range. I used to be a little skeptical when I read Mr. Hosmer's accounts of his enormous yields of honey, but when I visited his apiary last season I no longer had a doubt as to the correctness of his reports, for he really has a very desirable location for his apiary. It is often said that the reason that women do not succeed better in what they undertake, is because they lack energy and perseverance. Perhaps it may be so in some instances, but there are women endowed with noble gifts and possessing the requisite amount of busiuess tact to succeed in any legitimate business when once they have taken hold of it. And bee-keeping seems especially adapted to women, because it requires patience and constant attention rather than strength; then again, bees are great lovers of cleanliness and purity, and there seems to be a hidden quality in some men which renders them disagreeable to bees, and tobacco users and whisky drinkers are said to be very offensive to them, and they are very apt to punish them if they come near.

The superiority of the Italian over the common bee of this country is now pretty generally admitted by all who have tried them. This is especially said to be true of California, where it is said that they yield three or four times more honey than the common bee.

There are women gardeners and florists, who have risen to prosperity by commendable industry and good business qualities, so we hope to see many more giving their attention to bee-keeping. Many with limited means can get a few stands of bees and in a few years make quite a profit with a very small outlay, besides always having a supply of pure white honey for the table. We should say to every woman who enjoys out-door exercise, go to bee-keeping.—*Kate in Bee-Keeper's Magazine.*

BEES IN THE UNITED STATES.—There are two million bee-hives in the United States. Every hive yields, on an average, a little over twenty-two pounds of honey. The average price at which honey is sold is twenty-five cents a pound; so that, after paying their own board the bees present us with a revenue of $8,800,000. To reckon in another way, they make a clear gift of over a pound of pure honey to every man, woman and child in the vast domain of the United States. Over twenty-three and one-third million pounds of wax are made and given to us by these industrious workers. The keeping of bees is one of the most profitable investments that our people can make of their money. The profits arising on the sale of surplus honey average from fifty to two hundred per cent. on the capital invested.

A little more than six months ago John Killop, of Butte county, says the Oroville *Mercury*, bought one thousand head of sheep. A few days ago he sold, as the Spring clip of wool, $1,280 worth. He has a few more than one thousand lambs, that will give him a fleece from each this Fall. His one thousand fleece from each this Fall. His one thousand sheep have nearly paid for themselves already.

The Horse.

Russian Horses.

THE Russian horse is an animal of remarkable qualities, which are set forth in a manner to make us wish for his better acquaintance. Fast driving holds a pre-eminent place among the sports of the Russian gentleman. No expense or trouble is deemed too great to gratify his fancy in that respect. A good pair of fast trotters of a favorite breed sometimes bring as much as £1,000, a price which is looked upon as stupendous by the author, who has evidently never heard of the costly stud of our turf-compelling townsman, Mr. R. Bonner. These horses are fine-looking animals, but are only fit for town use. They are always driven without blinders, for it is the faith of every Russian coachman that if you give a horse a chance to look around and examine every object before him he will not shy. The post horses are unmatched in the world for swiftness and endurance. Another kind of a horse, and devoted to a peculiar service, is thus described: "The Tcherkess of the Great and Little Kabardah breed, is a splendid race of horses. Brought up in the wild steppe, amid dangers and nightly alarms, its apprehensive sagacity becomes early developed in a high degree. It is a fine animal, with a strong spine, powerful croop and thigh, and great width of shoulder and chest; the knee-caps are broad, the hoof as if formed of iron, head and neck tolerably light; everything seems combined to render them trusty, indefatigable servants to man. The Tchetchents, the most ferocious and determined brigands of the Caucasus (now fortunately only in small numbers) used to buy their horses in the Kabardah. They pick out the most promising one-year-olds, take them home, where they are, so to say, received into the bosom of the family. They receive their food when the latter sits down to a meal, and they often sit in the same room. The young children will play with them, talk to them, and crawl all over and about them. What wonder if the horse become almost as wise as his master? The young boys will sometimes mount him and gallop over the prairies, but no adult thinks of bestriding him before he has finished his sixth year. His bones have then become firm and fully developed, his sinews and feet are steel, his wind is invincible. He knows his master's voice and look—nay, he has some notion of his character. His nerves have from his birth been finely tuned to the sound of dangers or mysterious enterprise. It knows when its brigand master is on an expedition of risk and unlawful daring. A whispered word sends him down into the high steppe weeds or bushes, situated near road, at a place where the latter is difficult, where a convenient ditch is at hand to receive a carriage and its human freight. In breathless silence, both wait for what may turn up. The ears of the Tchetchentsian Black Bess slily move to every waft of the light wind, and, before the man can hear the slightest sound, he sees by the demeanor of his steed that business will soon be at hand. Hark! a faint sound of the postal bell (fastened to the pole of the vehicle) strikes his ear; he feels of his gun, his pistol, his razor-edged sword, the large dagger (kinchal), and breathlessly awaits the approach of the travelers. Not a single thought bestowing on the probable number or quality of the foe, he stands over his horse which slowly gathers his feet beneath him. At last the moment for action has arrived. The carriage is just at the right distance from the ditch or other accidental difficulty of the road—a soft touch, and man and horse are up. With the bound of a tiger the horse pounces upon the leaders, attacking them with hoof and tooth. Simultaneously the rider has fired at the driver; mad with terror the post-horses have jumped off the road, precipitating the carriage into the hole, and before its inmates have time to feel for their revolvers they are eased of at least part of their property, and may thank God if they have not broke neck and limb in their fall. Before they recover from their fright, the Tchetchent is already several miles on his gallop home. He has a hard ride before him, and he, as well as his cunning quadruped, knows it full well; for tomorrow there will be an inquiry about where Muhammed, or Arsslan Bey, or Moussa were that night. With a calm smile, our brigand friend replies to the Russian Grado-Natchalnik's question: 'Where should I be but here? The robbery was committed near the Akhonkskoy Stanitzi, 120 versts (80 miles) from here, and what? at 8 o'clock you say?—why, I was here at 12, as I can prove, and I could not ride that distance in three hours.' The officer, up to Tchetchent's tricks, and anything but satisfied, turns to the steed to discover from his appearance the effects of so severe a ride; but the nag is quietly eating his corn, and looking as contented and playful as if he knew that his master's safety depended on his brave bearing."—*From Review of C. W. Wahl's "The Land of the Czar."*

How to Know the Age of a Horse.—The colt is born with twelve grinders. When four front teeth have made their appearance, the colt is twelve days old; and when the next four come forth it is four weeks old. When the corner teeth appear, the colt is eight months old; and when the latter have attained the hight of the front teeth, it is one year old.

The two years colt has the kernal—the dark substance in the middle of the tooth's crown—ground out of all the front teeth.

In the third year the middle front teeth are being shifted, and when three years old these are substituted for the horse teeth. The next four teeth are shifted in the fourth year, and the corner teeth in the fifth.

At six years the kernal is worn out of the middle front teeth, and the bridle teeth have now attained to their full growth.

At seven years a hook has been formed on the corner teeth of the upper jaw; the kernal of the teeth next to the middle fronts is worn out, and the bridle teeth begin to wear off.

At eight years of age the kernal is worn out of all the lower front teeth, and begins to decrease in the middle upper fronts.

In the ninth year the kernal has wholly disappeared from the upper middle front teeth, the hook on the corner teeth has increased in size, as the bridle teeth loose their points.

In the tenth year the kernal has worn out of the teeth next to the middle fronts of the upper jaw; and in the eleventh year the kernal has entirely vanished from the corner teeth of the same jaw.

At twelve years old, the crowns of all the front teeth in the lower jaw have become triangular, and the bridle teeth are much worn down. As the horse advances in age, the gums shrink away from the teeth, which consequently receive a long, narrow appearance, and their kernals have metamorphosed into a darkish point, grey hairs increase in the forehead, over the chin assumes the shape of an eagle.—*Rural San.*

Weaning Colts.—Since replying to the question of a correspondent in regard to the feeding of a colt about to be weaned at three months old, in which we stated that in our opinion that was too young, we have met several large and successful breeders of horses and inquired of them as to their practice in this respect. The youngest age set for weaning was four months. One of them was clearly of opinion that, on the whole, Fall colts were the best, because they could run with the mare all Winter without the risk of getting stunted in their growth, as they would have the advantage of fresh grass in about the time of weaning in the Spring, so that they would keep growing right along, while if they are foaled in the Spring it is quite difficult to get them through the first Winter without getting some check to their growth, getting them pot-bellied or otherwise out of shape.

If weaned in the Fall, at say four or five months, they feed some oats, from one to two quarts a day and a bran mash frequently or some similar succulent food made up of shorts and cut hay. All concur in saying that it is very important to guard against any check in the first year's growth. They want to give plenty of exercise and plenty of nutritive, muscle forming food, like oats, shorts, bran, etc., and all concur in opinion that three months is too young to wean at this season of the year. This is a pretty important point and we should like to see it discussed.—*Mass. Plowman.*

Horticulture.

The Strawberry Region of the Pacific Coast.

SAN JOSE enjoys the right climatic conditions and irrigating facilities for the production of small fruits in great abundance and perfection. In many localities in our county the soil is excellently adapted to their growth also. Every year is developing, proving and systematizing the business. The locality, in its relation to San Francisco, is just right for economically transporting across the bay perishable fruits and tender vegetables in fresh condition. The time must soon come when all lands suitable for the purpose will be devoted to the culture of strawberries, asparagus, currants, gooseberries, raspberries, blackberries, pie-plant, cherries, tomatoes, etc., for San Francisco and other dependent markets.

We extract from the *Rural Press* portions of a late correspondence upon strawberry culture in our valley, which we find especially interesting:

Ten or twelve years ago the strawberries for the San Francisco market were raised in Alameda county, then some years later they were produced on the little fruit ranches in "the Willows," a body of rich garden land near San Jose on the south; but the strawberry plant requires an abundance of water as well as rich soil, and this had to be pumped from wells by wind-mills or by horse and steam power. This added much to the cost of raising them; besides the wind was not always reliable and machinery was liable to break and get out of fix, so from these vexatious causes the supply of water was often insufficient and uncertain when most needed. In the meantime, while the Willow folks were trying to supply the market with strawberries under these difficulties, they were gradually introduced into the country north of San Jose, which I shall designate as the artesian well region, which extends from the southern limits of the city (which is just within the bounds of this region) northward to the bay, a distance of twelve miles, and from the Milpitas road east of Coyote creek, to near Lawrence station on the west, a distance of six or seven miles.

Here, it seems, the strawberry plant has found all the conditions of climate and soil best adapted to its most successful cultivation—a rich, deep soil with an abundance of water from ever-flowing wells, and the cool, moist air from the bay, necessary to keep the plants vigorous and fresh during all the fruiting season, which extends from early spring to the middle of summer, or until other fruits become so abundant and cheap in the market that it will not pay to pick them.

In this favored region there are already more artesian wells than can be found in a region of like extent in the world, and more

are being made every year as the country improves.

All the strawberries are raised by Chinamen on shares; that is, they plant, cultivate, irrigate, pick the berries and pack them in the chests ready for the market, for one-half the proceeds after deducting the cost of chests, boxes, freights and commission for selling. The landholder furnishes the land, tools to cultivate, water to irrigate and cheap little houses for the Chinamen to live in, as his part of the contract. These contracts are made to extend for a number of years, the Chinamen taking care of the strawberry plantation the year round. Before planting the ground is well prepared and nicely graded, so that the water will pass evenly down the rows betwene the plants, which are set in rows twenty-four inches and eighteen inches apart alternately, and the plants one foot apart in the rows. A little ditch is made in the narrow space between the plants to irrigate them. The wider space is used as a walk while picking the fruit or cultivating the ground.

In former years, when the railroad company had a monopoly of the carrying trade between this valley and San Francisco, the fruit men claimed that they had good cause for complaint on account of high charges and poor accommodations, which led to arrangements that resulted in bringing the steamer "Relief" to their relief, which now makes regular trips between Alviso and the city. Alviso, being located at the junction of the Alviso slough with the Guadalupe river, about three miles from the bay of San Francisco, is a convenient and central point to receive the strawberries and asparagus fresh from the field in the evening, to be delivered at daylight the next morning in the San Francisco market. The steamer leaves Alviso every evening at eight o'clock, Saturdays excepted, and returning leaves the city at nine o'clock every morning, Sundays excepted. The charge for strawberries per chest is 42½ cents for freight and wharfage, the chest returned free. The boat is also fitted up in good style to carry and accommodate passengers, who can hardly fail, under the care and attention of such gentlemen as the captain of the Relief and his officers, to enjoy a ride on the bay of San Francisco. The fare to the city from Alviso is only 75 cents, and from San Jose and Santa Clara $1.00. I mention these facts particularly, as the running of this boat is closely connected with the interests of the fruit men of this valley.

I interviewed or had reports from fifty "patches," amounting in the aggregate to 1,110 acres, and estimating those I was unable to see at 170 acres, which I think is rather below than above the correct number, gives us 1,280 acres within this artesian well region; just two sections, and if all were planted together would make a solid strawberry patch two miles in length by one in width.

If it would be of interest to the readers of the *Press*, I could give a list of the names with the number of acres each had, but presume it would not be worth the space occupied. Suffice to say, Mr. C. E. Wade has the champion patch for size, 80 acres. James Murphy, 60 acres; William Boots and Judge Thomas, 50 each; Robert Syer, 45; J. Johnson 40; then eight patches have from 30 to 40 acres each; eleven have from 20 to 30 acres; 17 have from 10 to 20 acres each, and only seven have less than ten acres each.

I took note of 166 acres in asparagus, also among the strawberry men. In this deep, rich soil, with plenty of water, it does splendidly; and when San Francisco gets to be a city of a million of people, this little region I have been talking about can easily supply them with all the asparagus, strawberries and cream, and other such nick-nacks that they may want.

It was very pleasant driving over smooth, well-kept roads, among these beautiful California homes; all their gates standing wide open, as if they were not afraid to have you drive in (I do hate getting down to open gates). Some of the farmers here are on new improvements, but many of them have been here long enough to have nice, tasty houses, surrounded with such a wealth of beautiful trees, shrubs and flowers, of fountains of water and nice, smooth drives and walks, as can only be found among the most wealthy and aristocratic people in other countries.

Household Reading.

King and Queen.

THE happiest home I ever saw
Was where a woman reigned;
And yet the man himself was king,
Pray how was this attained?

The wife, who seemed submission's self,
And did her wifely part,
Queened it in an imperious way
Over her husband's heart.

Her chosen throne was in his home,
Her sceptre his dear will.
Her spotless robe and crown his love—
We see the picture still.

Yet like a king that held full sway,
His guarded well his own,
And loved his palace home, made bright
By love, and love alone.

The children, by their mother led,
Her bright example saw;
Obedience seemed an easy thing,
And "father's word" was law.

O, what a pleasant thing to see,
Of all things to be seen,
A home where reigns with equal power
A household king and queen!

A Question of Reform.

BY NELL VAN.

Now while the public attention is being so occupied with questions of reform for our youth of both sexes, is it not worth while for every parent to enquire, what is each one of us doing for our own boys and girls, to render them free and independent beings? Are we teaching them, first of all, to understand the laws of life and how to live healthfully? and along with our boasted civilization and free educational system, to which is being enforced the compulsory education law, are we giving these young people chances to learn any trade or employment by which they can earn anything towards their own support?

It may be there is freedom in the air we breathe which causes the docile partner of man to desire to compete with him in various industries, and no longer sit contentedly, with folded hands, waiting to be sought out for a life companion to man. Her desire is to learn some pursuit by which she, too, may earn the clothes she wears, when the brother who is reared beside her is taught to rely upon his own exertions for a livelihood upon arriving at maturity. Extend a helping hand to each one of these sisters yearning for an honest calling, and enlarge their sphere of usefulness by providing schools of training, where young women may obtain practical knowledge of a kind not found in the ordinary text-books of schools. We want fewer teachers and more thorough-going business men and women to prevail against the "hoodlum element," now becoming so formidable in our very midst. Even daughters of the wealthy are heard to say they wish, from their hearts, circumstances would admit of their stepping into some congenial pursuit, so that they need not go to "father" for every cent they would spend.

Parents who have the interest or their children at heart should strive for a new order of things, whereby this system of compulsory education shall not be an actual loss, in any way, to the poorer classes. If, along with book-learning, the young waifs were acquiring the knowledge of the skillful use of tools in the workshop, two ends might be served at one and the same time. Muscle exercise would balance the brain power, one being a rest for the other, while upon leaving school the choice of a pursuit or trade would be so arranged that the young person could at once become a producer instead of only a consumer—a worker rather than a drone.

A Chat and a Lunch.

BY ELISA E. ANTHONY.

EDITOR AGRICULTURIST:—I have not kept my promise of sending you an article every month; but a multiplicity of duties and then a flying visit to San Francisco must be my excuse, and I will endeavor to be more regular in my visits to you in the future.

I am not in the mood for sermonizing, neither for anything funny to-day, so will just sit down for a few minutes chat with your readers and contributors.

Do you know, friends, that more of you should contribute to our department of the paper? Now, don't say that you cannot; that you are not used to writing for a paper, and that you have nothing to write about. Every one has to have a beginning, and why not you as well as some one else? Just imagine that you are talking to your friends. Tell them your opinions, your surroundings, facts and fancies. Why, you will have more ideas pouring into your mind than you can write about at once, and you will have to write the second time, and so on—every time it becomes easier.

Write easily and naturally, use short, simple words, and if you wish to write "The house that Jack built," don't say instead, "The domicile reared by dedal Juan."

We all have different ideas and thoughts, and it would be a good plan to exchange the same, would it not? Our sex appear to take but little interest in our department, and it cannot be that they do not read it. Leave off some of the ruffles on your new suit, Emma, and write a short and pithy article to our paper; and you, Sarah, who have had such a wide experience, contribute something to the domestic department; and I hope the hundreds of intelligent women, into whose homes this paper makes monthly visits, freighted with glad tidings, will consider themselves addressed as well as the ones named.

Jewell, Nell Van, I have not seen your cheery articles lately; what is the matter? I hope you have not forsaken us. What would we do without those "Chats" and "Letters?"

My time is up and I will conclude with the following recipes, hoping for some in return:

VELVET CAKE.

Whites of five eggs, two cups sugar, two and one-fourth cups flour, one cup of milk, three-fourths cup of butter, three-fourths cup of corn-starch, essence lemon, two and one-half tea-spoons yeast-powder.

PUFF CAKE.

Two cups of flour, two cups of sugar, one cup of sweet milk, two eggs, two table-spoons yeast powder. Add the milk last.

INDIANA PUDDING.

Two-thirds of a cup scalded corn-meal, one cup of molasses, one-half cup of sugar, two table-spoons of lard, cinnamon, milk, salt. Bake an hour and a half.

TO COOK DRIED COD-FISH.

Soak as large a piece as needed over night. In the morning wash it and dry with a cloth, put lard in the frying-pan, roll the fish in flour and fry till brown on both sides.

Another way is to soak a piece, boil a few minutes until tender, then butter and put cream on it.

PINK COLORED ICING

Is made by adding a few drops of prepared cochineal to the icing—more or less, according to the shade required.

[Our Domestic department is made up this month, but we will allow these recipes under the Household this time, and glad to get them.]

The Dairy.

Treatment of Garget.

Garget is a hardening of the substance of the udder, arising from inflammation consequent upon obstruction in its tubes or tissues; inflammation may precede and be the cause of the obstruction and the the hardening, or they may come from external injury. The udder is divided into four distinct parts, connected only by membranous filaments, so that an affection of one part does not necessarily involve the rest.

Inflammation is a frequent cause of garget in heifers. Previous to birth, and preparatory to the active secretion of milk, there is, as every dairyman knows, a determination of blood to the udder, swelling its blood vessels and tissues, and rapidly enlarging the whole mass. In this engorgement of blood, if there is anything in the way of free circulation, stoppages are easily made. To guard against any unnatural interruption in the circulation at such a time, it is important that the blood should be thin and in its natural condition, and that the udder should be free from external pressure or violence. In heifers this enlargement is not as easily effected as in older cows, and obstructions are more likely to happen at the first birth than afterward.

To keep down the tendency to inflammation and hardening of the udder, heating food like cornmeal should be avoided, or fed sparingly, if at all, to heifers. Nor is it advisable food for old cows at this time. A little oil meal, rye bran or rye meal, may with advantage form part of the food before coming in. They act upon the glandular system, and by their relaxing tendency help to make the circulation free and easy. The refuse of the flouring mill and green food of any kind are excellent for all milk stock at this period.

In cows that have been milked garget frequently arises from leaving curdled milk in the bags when drying them off in the Fall or Winter. I have observed more cases of garget and loss of teats from carelessness and neglect in drying off cows than from all other causes combined. If the milk should chance to become thick, it must be milked out. If it will not come away readily by milking in the usual way, the bag should be rubbed down and manipulated till it is all worked out.

Bruising the bags when cows are giving milk is another cause of garget. Inflammatory action, whether local or general, causes milk to curdle. When a cow's bag is heated so that the bruised part becomes inflamed, the milk which lies in contact with the inflamed part, soon coagulates and stops the passage, which is the more easily done by reason of the swelling of the inflamed part.

In cases which are not very severe, washing the bag two or three times a day with water will be sufficient. Many recommend cold water, but warm is better. Cold water will produce, by reaction, a rush of blood to the parts chilled, and counteract, in part, its efficiency. Warm water will at any time reduce inflammation, by an external application, more rapidly than cold. If the bag is milked out clean, this treatment will generally be sufficient.

In severer cases, internal remedies may accompany the bathing. Poke root, grated and given in a mess of feed, is a common prescription, and, though I can see no reason for its producing any specific effect, it does often act like a charm; and what seems equally strange, cows troubled with garget often show an appetite for it, though they would reject it at other times. Dose, bulk of half a hen's egg. Half an ounce of saltpetre morning and evening, dissolved in the water she drinks, will often render essential aid. When the case is so severe as to need internal remedies, the bag, besides being washed morning and evening with warm water, may be bathed in the middle of the day with liquor of ammonia diluted with some light oil like oil of turpentine, and well rubbed in. This will help to dissolve and scatter the obstructing matter. In such a case the patient should be kept in a comfortable stable and highly fed with laxative food.—*Cor. Live Stock Journal.*

A New Departure in Cheese Making.—Oleo-margarine has been put to a new use the past Summer. A company has been formed and has been engaged since last Spring at McLean, Tompkins county, New York, in manufacturing cheese from milk skimmed at twenty-four and thirty-six hours. The editor of the *Utica Herald* has visited the establishment and gives, in that paper, an account of the process of manufacture. The milk after being skimmed, is placed in large vats where it is heated to the proper temperature for receiving the rennet. The oleo-margarine is received from the Brooklyn factory and is as pure and clear as can be made from clean tallow. It looks, when melted, like a rich golden oil and is added to the milk with enough rennet to coagulate the mass in about eight minutes, during which time attendants keep the milk agitated so that the oleo-margarine will mix with the milk and be seized by the curd as it forms.

While the curd is being cut, more oil is added and as much of it made to adhere to the curd as possible, while the surplus is reserved for use in the next batch. A microscopical examination shows that the mechanical mixture is very intimate, the parts being evenly distributed, and closely resembles the curd made in the usual way.

The editor found about three thousand cheeses on hand at the factory, and, after a free use of the trier, was surprised at the quality disclosed. He says: "There was plainly a lack of fancy flavor, but the way in which the skim milk has been brought to produce a rich, mellow cheese, with a good flavor, is wonderful. It is not right to judge the cheese by the standard of fancy, because if the material of which they are made (skim milk) were worked without the enriching, the result would have been exactly the reverse of fancy. It is difficult to judge the cheese by the standard of skim cheese, because there is scarcely a cheese which shows even a trace of skimming. The curing seems to be delayed longer than in full cream cheese, and the more time given the more perfect seems to be the incorporation of the oil and the smoother and sweeter the body of the product. The cheese at McLean is above the average of the full cream cheese which we have inspected this season, in marketable qualities. The butter which is made of the cream is a strictly fine creamery article. It is made according to the usual creamery practice.

The dairymen in the vicinity, have received better returns for their milk the past Summer than ever before. Ten pounds of milk is called a pound of cheese, and for every ten pounds of milk, the farmer receives within two cents of the highest fancy price of cheese as quoted in the New York market. The business bids fair to be extended the coming season.

Cheese Statistics.—President Fairchild, of the Butter and Cheese Exchange, New York, says the present production of cheese is currently estimated to be about 300,000,000 lbs. The receipts at New York for 1874 were 2,046,575 boxes, and the shipments were 1,639,489 boxes. The exports from the United States ports for the fiscal year ending June 30,1874, 90,611,057 lbs., and the exports from the Dominion of Canada were 23,183,223 lbs., exclusive of the exports to the United States, making a total American export of 113,794,280 lbs.

Butter Taints.—In making butter too much care cannot be taken with respect to its surroundings. In the first place the quality of the cows should be well considered, their comfort consulted by being sheltered in a clean commodious place at night, separated from other kinds of stock. No rough, boisterous helpers should be employed about the premises, as it is well known by careful, experienced dairymen that it not only makes a difference in the quantity, but also affects the quality of the butter.

It is not our aim in this article to enlarge upon butter-making, but to point out the shoals that small farmers run afoul of in their butter operations, and others who deal in it, and finally those that use it.

Butter readily takes up foreign taints and odors, and therefore the greatest pains should be taken to have a place separate and apart from everything else, especially decaying vegetables, kerosene, or any volatile or pungent substances, and ventilation should be well looked after.

The above remarks will also apply to the dealers in and consumers of butter, as a great deal of trouble arises from placing it too near tar, turpentine, coal oil, etc., in stores and dwellings.—*Pacific Grocer.*

Points in Butter-Making.—At the recent meeting of the Vermont Dairymen's Association there was an interesting discussion concerning several points in butter-making. Mr. Arnold was asked how he would build a milk-room for a farm dairy. He replied that where the milk was usually all right and conditions favorable he would need only a cheap tight room, with double walls to enable him to control the temperature. As for setting, he preferred large pans, large enough to hold a whole milking. It is time to skim when the finger can be drawn through the top without having the cream close behind it. When cream will do this it is about ripe enough to churn. When cream foams in the churn it may be cured by warming. Cream should not be churned as soon as taken from milk. It should be stirred together and allowed to ripen all alike. This will occur in twelve hours or so. But cream should not stand until whey is formed in the cream jar.

Stock Breeder.

CATTLE-RAISING IN THE UNITED STATES.

The rapid increase of population in this country tends constantly to advance the price of meats. The Eastern, the Middle States, Ohio, and now Illinois, have in turn found feeding and fattening more profitable than raising cattle. The beef for the great markets of the country must hereafter be raised mainly beyond the Mississippi, even beyond the Missouri, though brought to full maturity and fattened to a large extent in the more eastern corn-growing States. It is not necessary, however, that beeves should be "finished off" East of the Missouri, for there is an immense area of corn-growing land in Nebraska, Kansas, Texas, without mention of large areas of comparatively low elevation in New Mexico and in the southern portions of Colorado, Utah and California. The railroads now penetrating the southwest are furnishing inducements for beef-packing in stock regions, which are by no means disregarded; and they have already commenced a powerful diversion from the business of stock-driving over long trails.

All intelligent Americans have heard of the pastoral region of America, and may have a vague idea of its immense extent. Without mentioning 369,000,000 of acres in Alaska, the area of pastoral States and Territories is 1,196,000,000 of acres, divided as follows:

	Acres.		Acres.
Texas	175,000,000	Utah	54,005,043
Indian Territy	44,154,240	Arizona	72,906,240
Kansas	52,043,520	Idaho	55,228,160
Nebraska	48,636,800	Montana	92,916,640
Dakota	96,536,178	Washington	44,796,160
Wyoming	62,645,068	Oregon	60,975,360
Colorado	66,880,000	California	120,947,840
New Mexico	77,868,640	Nevada	71,737,600

Of all this territory there remains unsold, the property of the United States and Texas, about 1,000,000,000 acres. If we make a liberal allowance for land suitable for tillage, which is mainly found in the eastern halves of the four first-named divisions, and in portions of Oregon and California, and also for water and rock surfaces, and such forests as are dense enough to preclude pasturage—say an aggregate of 500,000,000—there would remain about 700,000,000 of acres suitable for pasturage, and scarcely valuable for anything else, furnishing both summer and winter grazing of the most nutritious grasses of greater or less abundance in the different sections. Here then is a pasture twenty times as large as Illinois, twenty-eight times as large as Ohio, and equal to 120 States like Vermont. And on the area of more than 100 such States the annual crop of herbage is utterly wasted, while the laboring people of Europe are crying for meat, and millions in our own cities are craving earnestly the boon of a single cent reduction per pound in their beef supplies. If we allow ten acres of this unutilized pasturage for a term of five years to produce a steer weighing net 500 pounds, the annual gain in beef at five cents per pound would equal the value of the cotton crop, or nearly $300,000,000. This is but $25 per head, and I have known a sale of 1,000 fat bullocks upon those western plains at $50 per head. These figures are merely suppositions as to the grazing capacity of this area, and can be modified to suit the most conservative views without greatly reducing the magnificent saving which would result from complete utilization of our grasses. A very handsome sum might be added from similar savings throughout the Southern States.

The numbers of cattle on this area were placed at nearly 5,000,000 in 1860 in the census, and in 1870 at nearly 5,500,000. There were at least a million that escaped registry by census officers, as they have a record by local assessors, and the present numbers are not less than 7,000,000. In official estimates they have never been placed above 6,000,000, but constantly accumulating testimony sufficiently proves the existence of fully 7,000,000.

The Texas State returns of 1870 reported 3,651,316 from 118 counties, 41 other counties being marked in the tabulation "unorganized," "no return," or as attached to other counties, and the table itself labelled, "returns incomplete." Most of the 41 are new counties, yet they contain a considerable number of unreported cattle. A greater deficiency still comes from the fact that the most conscientious cattle-raisers return the number which they feel quite sure of finding easily upon the range, and that the less conscientious report the smallest number for taxation that the internal contest between their stupidity and caution and their conscientiousness will allow. Since 1870 the heavy trade in stock driven to Kansas, shipped to New Orleans, or packed, or otherwise prepared, has reduced the actual numbers of 1870, as is claimed by local authorities. In some counties, in which immigration is active, in the eastern and northern parts of the State, this is undoubtedly the case, the large herds being all in the western section. But one county east of the Brazos has 50,000 cattle; there are eighteen west of that river, as follows:

Atascosa	168,764	Jackson	86,542
Austin	58,295	Lavaca	55,335
Bee	60,317	Matagorda	78,311
Bell	54,946	Medina	51,971
Bexar	62,044	Nueces	183,068
De Witt	66,619	Refugio	89,408
Fort Bend	56,833	San Saba	51,925
Goliad	64,750	Uvalde	67,172
Gonzales	75,270	Williamson	50,144
Harris	77,117		
Total			1,445,141

The increase of population in Texas, the encroachments of soil culture upon pasturage, and the extension of cattle-driving and shipment, are rapidly diminishing the proportion of numbers of stock to population. In 1860 there were 485 stock cattle and 99 cows to each 100 of population; in 1870, though herds increased during the war, there were but 374 and 52 respectively, by census computation. The order of precedence, at the former date, of States having more "oxen and other cattle" than people, are: Texas, California, Florida, Oregon, Washington Territory and Nebraska; in 1870 there were only Texas, Florida, and Washington Territory.

States.	1870. Population	To each 100 inhab'ts Milch cows.	To each 100 inhab'ts Oxen and other cattle.	1860. Population	To each 100 inhab'ts Milch cows.	To each 100 inhab'ts Oxen and other cattle.
Maine	626,915	22	32	628,279	23	36
N. Hampshire	318,300	28	41	326,073	29	52
Vermont	330,551	54	42	315,098	55	62
Massachusetts	1,457,351	7	7	1,231,066	11	11
Rhode Island	217,353	8	7	174,620	11	13
Connecticut	537,454	18	22	460,147	21	31
New York	4,382,759	30	15	3,880,735	28	21
New Jersey	906,096	13	7	672,035	18	14
Pennsylvania	3,521,951	20	18	2,906,215	23	25
Delaware	125,015	19	20	112,216	20	31
Maryland	780,894	12	16	687,049	14	22
Virginia*	1,225,163	15	26	1,219,630	18	41
N. Carolina	1,071,361	18	30	992,622	23	46
S. Carolina	705,606	13	21	703,708	23	48
Georgia	1,184,109	19	39	1,057,286	28	66
Florida	187,748	32	175	140,424	66	210
Alabama	996,992	17	31	964,201	23	56
Mississippi	827,922	21	39	791,305	26	60
Louisiana	726,915	14	32	708,002	18	54
Texas	818,579	52	374	604,215	99	485
Arkansas	484,471	26	47	435,450	39	91
Tennessee	1,258,520	19	31	1,109,801	22	46
W. Virginia	442,014	23	44	376,688	26	55
Kentucky	1,321,011	18	34	1,155,684	28	49
Ohio	2,665,260	24	29	2,339,511	28	40
Michigan	1,184,059	24	25	749,113	23	40
Indiana	1,680,637	29	37	1,350,428	26	52
Illinois	2,539,891	25	42	1,711,951	30	61
Wisconsin	1,054,670	20	36	775,881	26	41
Minnesota	439,706	27	42	172,023	33	45
Iowa	1,194,020	30	53	674,913	28	51
Missouri	1,721,295	23	43	1,182,012	29	69
Kansas	364,399	33	68	107,206	26	60
Nebraska	122,993	23	41	28,841	24	104
California	560,247	20	83	379,994	54	256
Oregon	90,923	53	79	52,465	101	192
Nevada	42,491	14	59	6,857	13	66
Utah Territory	86,786	20	24	40,273	29	55
New Mexico T.	91,874	17	44	93,516	36	58
Washington T.	23,955	70	126	11,594	84	163
Dakota T'y	14,181	29	58	4,837	6	11

* Virginia in 1860 is restricted to its present boundaries for the purpose of comparison, and West Virginia in 1870 is compared with the same area as in 1860.

Texas thus had nine times as many cows as Massachusetts in 1860 in proportion to population, and forty-four times as many oxen and cattle; and in 1870, seven to one and fifty-three to one respectively, the disproportion becoming less as to cows and greater as to other cattle. These States represent extremes in cattle supply. The table will furnish at a glance any comparison of sections desired. An increase in both milch cows and other cattle, in proportion to advance in population, is made only in Iowa, Dakota, and Kansas, but the proportion of cows has also increased in New York, Wisconsin, and Minnesota. This advance is due to the growth of the dairy interest in New York, and mainly in the other States to the comparative assumption by stock growing of its proper position in farm economy of the more recently-settled prairie States.

There is a wide variation in prices in different sections of this pastoral area. In the mining territories the demand for working oxen, beef, and milk, not to mention butter and cheese, has generally exceeded the supply, and kept prices well advanced. Texas, with immense herds, without railroads or near markets, is content with the lowest rates known in the United States, and able to supply hundreds of thousands annually, three-year-olds and upward, to the feeders and packers of the States, and younger stock to the stock ranches and ranges of the territories. The following averages, from official returns, represent very fairly these differences in prices of milch cows:

	1875	1874	1873	1872	1871
Texas	$32 19	$35 28	$43 41	$44 66	$46 36
California	29 94	32 48	33 50	34 12	36 82
Territories	13 33	15 25	13 50	14 12	12 83
Other cattle:					
Texas	18 92	19 52	22 71	23 80	26 92
California	17 14	19 46	22 50	23 16	26 94
Territories	7 50	8 02	7 51	8 10	7 37

The variation in prices in different counties in Texas is large, depending mainly upon the comparative prominence of stock-growing and general agriculture. Galveston is an extreme case, the prices of stock of one, two, three, and four or more years old, ranging from $9 to $36. The next highest prices are in Collin, a northern wheat-growing county, claimed to be one of the most fertile in the State, ranging from $5 50 for yearlings to $20 for full-grown cattle. Titus returns $5 50 to $18. In Comanche, a thinly-settled stock-raising county, with a name properly suggestive of Indians, the figures run from $1 to $10. The averages for the State of these four classes are, respectively, $3 18, $5 28, $8 16, and $11 82. The highest price returned in January for cows was $30 in Harris, and $20 in Collin, Ellis and Marion. The lowest figures are $6 in Mason, $8 in Cherokee and Fayette, and $9 in Live Oak. The State assessment of stock cattle is usually about $4, scarcely ever reaching $5. My estimate of present real value is $7 50.

The profit of well-directed stock-growing enterprise in Texas has been large, even princely. It is claimed that it costs less to raise an ox there than a chicken on the Atlantic coast. While money is essential to large and immediate returns, it is, perhaps, true that in no other section of the country can an industrious poor man arrive at competency with so little effort, especially if engaged in stock-growing. I have an account of an old lady in Mason county, who started with several chickens, a pig, a cow, an old pony, and a boy of twelve years to assist her, and who, in five years, attained an annual income ot $2,000 in gold.

Cattle do well in nearly all parts of Texas, from the salt flats on the coast to the mountains, and from the Rio Grande to the cane bottoms of Red River. The pine woods region of the east is less desirable than other sections, having less nutritious grasses, though they are quite sufficient for local requirements. The black-wheat lands of the northern central counties, at least twenty in number, are more valuable for general culture than mere grazing. Western Texas is the chosen home of the grazier, from the mouth of the Rio Grande to the northern limit of "the Panhandle," near the southern line of Colorado—a pasture eight degrees of latitude in length, without fencing or rental, now, as heretofore, full of cattle, having literally "millions in it." Yet all sections are not equally full, immense tracts having comparatively few. The cattle region is west of the Brazos, mostly west of the Colorado, and the favorite locations are in the country drained by the Nueces and Atascosa. The largest herds are in the southern half of this western belt, the more northern counties being subject to incursions from Indians, as well as the more distant and almost unknown divisions, Presidio, El Paso, and the "Panhandle," through which runs the Canadian River. In all this region summer and winter pasture is free to all, the owners of the cattle owning little or none of the land, which belongs to the State of Texas. The cost of raising stock is practically expressed in full in the expense of branding, watching, and gathering for sale. Drovers are accustomed to gather up droves of 500 to 1,000 cattle, three or four years old for brief feeding for beef, and two years old for stock-ranches in Kansas or the Territories. He takes a power of attorney from the owners, authorizing him to drive and sell their cattle, and the hide and cattle inspector takes notice of every brand and ear mark, and classifies them as to age and value, and the inspection is recorded in the County Clerk's office, constituting a legal indebtedness of the drover for every animal thus taken.

The trade of drovers has been very brisk since 1870. On the Old Chisholm trail, from May 1 to November 11, 1872, 292 drovers passed Caldwell, Kansas, with 349,275 cattle, making the average per drove very nearly 1,200, the largest droves being, 4,500 by Little & Perryman, 3,600 by Brooks & Mulligan,

3,400 by G. Van Winkle & Co., 3,200 by Brooks & Gatten, 3,058 by Harden, 3,000 by King & Staples; several at 2,500 to 2,800, and two as low as 350. This will illustrate fairly the size of droves from Texas to Kansas.

I have seen many statements of the size of herds in Kansas. It is impracticable to attempt to name all the large cattle ranches. I will mention a few herds recently reported in my correspondence. On the Gulf coast a Mr. Kennedy has inclosed the "Laurcles" ranch by running a fence fifty miles, costing $100,000, across a neck of a peninsula, thus inclosing by fence and water 169,000 acres. The Rockport and Fulton Pasture Company, on Nueces Bay, incloses 115,000 acres, with a few miles of fencing on one side. Rockport is the great cattle-shipping port for Western Texas. In Refugio county there are large herds: John H. Woods', 17,500; John Linny's, 17,500; J. & R. Dushel's, 9,000; B. F. Gooch, in Mason, 20,000; Barrell Yoloorca, of Grayson, county, has 10,000 scattered over several counties. In San Patricio and other counties, Coleman, Mathes & Fulton, of Rockport, estimate their cattle at 85,007—25,000 in pasture, the remainder on the range. They have made a single purchase of cattle to the amount of $130,000. The Peninsula Company have, near Rockport, a pasture of 35,000 acres, inclosed by a cypress fence. In Limestone county Heaton & Harmer have 8,000 head. In Harris William McFaddon has 18,000, and George Butler 15,000. I have a record of a large number owning 3,000 to 10,000, and there are many more that own much larger herds, were there time to collect and space to print them.

Probably more than 2,000,000 of Texas cattle have been driven into Kansas since the war. The drive of last year was not so heavy as those of the previous years, but has been estimated as high as 175,000. The shipments of cattle over four Kansas railroads, from January to August, 1873, consisting mainly of cattle wintered over, was 102,426; and for the same period in 1874, 122,914, with 115,000 remaining to ship. It was estimated that 50,000 more wintered cattle were taken by government contractors. The drives of one year are either kept on the Kansas or Nebraska ranges till late in the Fall, or wintered over before sending east.

A detailed account of this cattle movement, of the cost of driving and wintering, of the contests with native stock owners arising from fear of the Texas cattle disease, and of the business generally of the cattle grower, would more than fill the place alotted to this chapter. It is a business of manifest importance in the future of the American meat supply.—*J. R. Dodge, in Phrenological Journal for May.*

Sour Milk for Calves.—Farmers, as well as other classes, have yet much to learn about many of the common practices of daily life and experience in their respective callings, and much also must be unlearned to make way for the advanced ideas which science and practical experiments are constantly bringing up for investigation. A few years ago, it was the accepted opinion of the masses of the people that the value of milk as an article of food for man or beast, was principally determined by the amount of cream it contained, and skimmed milk was looked upon as being almost worthless for anything but for pig feeding, and not very good for that.

Later investigations have shown that the greater part of the food material of milk is contained in the skimmed milk; that skimmilk cheese is poor, not because it is devoid of nutriment, but because we have not learned how to make and cure it so as to have it palatable and digestible. Many farmers have noticed that those cows which give milk poor in butter, often raise extra fat calves; and we occasionally find cows giving milk so rich in fatty substances that their calves do not do as well fed upon it as upon milk containing a smaller proportion of cream.

We have raised a few calves every Summer for several years past, and have had excellent success with skimmed milk, both sweet and sour, when judiciously fed. In kindness many are quite apt to over-feed, and they do not feed with the regularity that would be best for the calf. It always makes bad work to let a calf get very hungry and then give it an extra amount of milk, and if the milk is very cold it will be all the more harmful.

Calves are taken from their mothers and fed upon milk which is not only skimmed but often cold, and perhaps given at irregular intervals, and in two large quantities; and because they do not always do as well as when fed in the natural way, the skimming is made to bear all the blame. But it is a fact that very fine calves have been raised on skimmed milk, and sour at that. The subject of feeding skimmed and sour milk to calves was discussed at a late meeting of the Vermont dairymen, and Mr. Stewart, of the *Buffalo Live Stock Journal*, spoke in the strongest terms of the value of skimmed and sour milk for growing good calves.

We also frequently receive letters from the readers of the *Farmer*, giving accounts of very satisfactory experiments in raising calves on such food. We have before us now a letter from a reader at Enosburgh, Vermont, who has a calf, nine months old, that weighs seven hundred pounds, half Jersey and half native, it never having had anything but sour milk and hay since it was old enough to do well on such feed, which has been ever since it was quite young.

During a private conversation upon this subject, with several gentlemen, at the Vermont dairymen's meeting, Mr. Isaac T. Parris of Fairfax, Vt., informed us that he had had the best of success in feeding sour milk to some dozen calves per year. He begins to feed it sometimes when the calves are but a week old. He prefers to have it thick or loppered, but not fermented. At six or seven weeks old, he gives wheat bran with the milk, and at ten weeks, adds oat meal. They learn to eat hay very young, and are often chewing the cud at ten days old. He finds that his best butter cows give milk too rich for calves, and that poorer cows fat the best veal.

Mr. Stillman Stone, of Lunenburg, Mass., is also a strong advocate of sour milk for calves. He says they do not all take to it alike, but when he gets a calf so that it likes it, he has no more trouble with it. We find a great difference in calves about eating whatever is given them. Some calves will take almost any wholesome food with a good and constant appetite, while others are always dainty and particular about what they eat. The latter kind seldom make hardy cows, and when one finds he has such an animal the sooner it is disposed of the better.—*N. E. Farmer.*

Porcine.

Thoroughbred Swine.

THE theory has been advocated, and practice has clearly demonstrated that it is impracticable for the general farmers of the country to become breeders of fine, or properly speaking, thoroughbred stock, with the idea of disposing of it at fancy prices. There may be many reasons ascribed for this, the principal of which is that it takes more time and more capital to start than most of them are in circumstances to afford, to say nothing of the business being a profession which requires more study and experience than most of them can give. The breeding of any of the improved breeds of swine is, however, quite different from horses, cattle, or sheep, and we are fully convinced that every farmer of the country can become a breeder of thoroughbred swine, and make it a remunerative business. Some may say we cannot all sell them at fancy prices, which is very true, neither do they need to do so in order to make it profitable. The man who buys a Short-born cow at $1,000 must necessarily sell her calf at $300 or $400, or the investment will not be a paying one. Such an animal will produce only one calf in a year.

The case is quite different with swine. A farmer at the present day can buy a pair of thoroughbred hogs ready to breed, or any of our improved breeds, at from $35 to $50 per pair, and with ordinary success will produce twelve to eighteen pigs during the year. Thus it will be seen that he only has to sell them at $1 50 to $2 to be making as much on the capital invested as the fancy breeder who is purchasing cattle and horses at $1,000 each and disposing of the produce at $500 per head. Then it is at once apparent to all that the above prices are not as much as can be realized for the common scrub hogs of the country at two or three months old. Then should he find difficulty in disposing of them at that age, it will pay him three-fold to keep them to twelve to fifteen months of age, at which time they will be hogs weighing upward of 300 pounds, which are worth from one and a half to two cents more per pound, than the scrub hogs brought to market.

We ask the careful attention of the reader to this matter; we are not writing from a theoretical standpoint, but from practice of what we write, knowing that such are daily occurrences. These being the facts, why will so many of our farmers persist in keeping a stock of hogs so well known as prairie rooters? Some may say they cannot afford to buy the stock to start with. This excuse will hold good only in but few cases, while the prices of all our improved breeds of swine are so low. The experience of all who have tried it fully attest that the use of thoroughbred males in horses, cattle, sheep, or swine, is one of the best paying investments they can enter into. And if it is so in cattle, then it must be doubly so in swine; and if those who do not believe in thorough breeds will use thoroughbred males of any of the improved breeds on their common stock of cows, it will soon show a marked improvement that will in a very short time pay many hundred per cent. on the investment. Surely no objection in regard to cost can be raised from pursuing this course while the best breeders of the country are offering choice males at $15 to $25 each. —*Alex. Charles, in Swine and Poultry Journal.*

White vs. Black Hogs.—A correspondent of the *Rural Southland* writes:

In my boyhood, some twenty-five years ago, my father had several hundred fine white or light colored hogs. He also had about thirty black hogs of a new and different stock. The cholera came—the first ever known in our section of country—and it reduced his main stock of white or light colored hogs from several hundred to seven hogs; while of the black ones it killed only three; yet all had the same showing, and were equally exposed. I have since noticed something like the same relative difference in mortality, from the same cause.

As to the respective merits of the several black varieties, the two leading and rival breeds are the improved Berkshire and Poland-China, each of which has great merit. The Berkshire under certain circumstances and raised in large numbers, may be the better of the two; but for us, I think it only necessary to know both breeds thoroughly in order to decide in favor of the Poland China. We don't want woods or wild hogs. The Berkshire is predisposed to wildness, and a little neglect makes him as wild and fleet as a buck; whereas, the Poland China, though thoroughly industrious, is the most docile, tractable and intelligent of all hogs.

Generally, we want grazers and not rooters. The Poland China is naturally and essentially a grazer, and the Berkshire a rooter.

Everywhere endeavor to be useful, and you are everywhere at home.

Sheep and Goats.

The Angora Goat Again.

It is natural enough for people living in sections of the country where the Angora goat will not thrive, and where they have failed at it, to think the business of breeding them a failure. But the stock men on this coast know there is profit in Angoras. We give the following criticism, which appeared in the *Prairie Farmer* some two years ago, to show the off side of the goat question:

And now comes Mr. Wm. Landrum, of Messrs. Landrum & Rodgers, of Watsonville, California, "pioneer breeders of Cashmere or Angora goats," who desires to be heard on the "goat business." That Mr. L.'s position may be more fully comprehended, we should also state that the firm is connected with a company who have purchased the Guadalupe island, and propose to devote a considerable part of it and of the capital stock ($500,000) to breeding goats. Whether there are any shares to sell we are not advised. The essential points of his letter, which is very long, are as follows:

He gives the address of several brokers who, he says, can sell, or rather have sold, mohair at from 24 cents to $1 25 per pound, and calls these "full prices." As those who buy, he names Messrs. Sheppard Bros., of Philadelphia, and Messrs. Hall, Broadhead & Co., of Jamestown, New York. He also cites general order No. 92 of the War Department, requiring certain uniforms to be ornamented with mohair cords and tassels, and says the contractors for these goods "must have mohair." These furnish the market for the fleece.

In a former article in the paper to which the letter of Mr. L. is in response, we asked the question whether any one who purchased breeding goats purporting to be Angora or Cashmere, at the prices ruling a few years ago, could now realize for his stock, including increase and wool, and excluding cost of keeping, the amount he paid for the original stock, and stating that if such a person could be found we would gladly publish his address, together with the address of the party willing to buy at such figures. In reply to this the writer presents the names of several who, as he says, have made purchases of goats, principally from himself, within fourteen months past, at prices ranging from $50 to $250 each, and also instances others who, commencing some years ago, have made money in selling goats, pelts and mohair. There is, however, nothing new or valuable in the information his letter affords us on this point, except that there still are parties willing to pay about one-tenth to one-fourth the prices at which these goats were sold in this region a few years ago. Even this, however, is not certain, in view of what he says of the past trade in goats in Tennessee, Kentucky, Illinois and Ohio in the following extract:

"I have carefully watched the Angora goat business for 25 years, and have kept a record of all the pure breeds ever imported to America; their quality, breeding, and to whom sold and their whereabouts, save a very few scattering animals, sold one or two in a place. I also know of many failures and the causes thereof. Also of many successes. There has been two causes of failures: First, like all new enterprises, the majority of people know but little about the business, and designing, dishonest men practiced deception, and deceived farmers with worthless low grades for pure breeds. With such goats they could do no better than make a failure, and without the knowledge of the cause, naturally would condemn the whole Angora business.

"Tennessee, Kentucky, Illinois and Ohio suffered worse than any other states. Williamson and his associates sold over $80,000 worth of grade goats in those States of a cross between the Thibet goat, the Angora and the native goat. Such goats could not be bred up in ten years, with good Angora bucks, to be worth anything for fleece, hence you will daily meet men who will tell you in that country that the Angora is a humbug. They or their neighbors tried them, and paid fabulous prices for them, and failed. Richard Peters, of Atlanta, Georgia, has a small band of pure breed Angoras. I. S. Dicht, perhaps, has ten head; the remainder of his are grades. I could give their history. Robert S. Scott, of Kentucky, has one pure ewe; and three years increased two or three bucks; the balance are grades. Ogden, of Ohio, had one pair of pure breeds. Chenery, of Boston, sold a few pairs of pure breeds to go West, in 1867, that I failed to get the address of, but no lots of over one ewe in a place that I heard of, and I interrogated him very closely at the time; and up to that time I have a record of all the pure breed transactions in America. I assert positively that the failure is not in the Angora goat, but in the deception and dishonest representations made by men about the goat to persons who have no facilities to find out the truth. It is very true that they will not do so well any where east of the Rocky Mountains, as they do on the Pacific coast. Had they not proved to be a great source of profit to the breeder on this coast, they could never have been spread over the country, from the fact, that the word *goat* was unpopular, and attached to it was the history of all the Cashmere swindles in the East, as they were termed. We even have men here now offering grades as pure breeds in this state, and often deceive men with them, to the disgrace and injury of the business."

It will be news to our readers in the States named to be told that the animals for which they paid from $500 to $2,500, a few years ago, were after all only grades, and it is certainly curious that these could not have been bred up by the use of pure crosses in ten years to be worth anything, while even now Mr. Landrum is selling grades at what seem big prices.

In closing he gives the following advice to breeders;

"Accept no goat as a pure breed that cannot be traced to the man who shipped it from Angora. Secondly, all imported goats are not pure breeds. A pure breed goat has no under coating of any kind mixed with his fleece, no coarse main hip locks or kemp; should be clear silver white, and fleece all over alike, belly and breast well covered. Many other points may be considered, but these are indispensable."

The most reasonable conclusion on the whole subject seems to be that some portions, or the rougher and less fertile districts of the western slope of this continent, may be adapted to the profitable culture of these goats, in competition with those countries from which the European and the few American manufacturers of lustre goods from mohair now obtain their supplies of the fibre. The islands of the Pacific ocean may afford still other fields for the enterprise, but there is nothing in the history or present condition of the traffic in mohair or the goats in this country that is likely to attract a careful farmer to the culture of the goat in preference to the culture of sheep. The day has gone by when any man in the central states has any such preference, so far as our knowledge extends.

IMPROVEMENT OF SHEEP.—The improvement of a flock by means of breeding, requires very considerable and long continued care.

The quality of both parents must be considered, both with a view of correcting evils and pepetuating good qualities. It must be acknowledged, however, that in the majority of cases the influence of the male preponderates over the female, and the characteristics of the former are more likely to be impressed on the offspring than those of the latter. This is shown in most animals. The mule partakes much more of the nature and size of its sire, the ass, than of its dam, the mare. A large Cotswold ram put to a Southdown ewe produced an offspring much more resembling the former than the latter, and a pony mare put to a full sized horse will produce an animal half as large again as the dam. Though this, however, seems to be nature's rule, it is not one without exception, for occasionally we see the very opposite results.

In breeding animals of a pure kind, the principal rule to be observed is, to breed from the very best of both sexes, to cull the faulty ones every year, saving only the female lambs for the future flock that are as free from defect as possible. Of course, the flock must be kept up to its proper size, but year by year the finest animals should be selected, until, in the course of time, the flock will entirely consist of them. Until this is nearly accomplished it will not be prudent for a farmer to employ his only tups for the purpose, as he will probably be able to hire or buy superior rams from others, and it will not do to spare some expense in thus raising the character of his sheep.

There are various points that are sought after by breeders, not because of the particular value of those points, but because they are evidence of other valuable qualities, such as aptitude to fatten and early maturity. Thus, in the Southdown breed, small heads and legs, and small bones are esteemed, as they are qualities which are always found connected with fattening properties. Black muzzles and legs are also valued, probably because they denote the good constitution and hardihood of the animal. We must, however, take care, lest, in carrying these points to an extreme, we neglect other valuable qualities. Straightness of the back, breadth of the loins, and rotundity of frame are points that cannot be disputed, and are not merely *signs* of good qualities, but good qualities themselves. The straightness of the back, so perfect in the Leicester, is by no means natural to the Southdown in an unimproved state, but rather the contrary. In the improved breeds, however, it is present, and is justly regarded as an excellent point, giving a better surface for the laying on of flesh, and affording more scope for the abdominal organs. Its converse, too, a round or convex back, is produced or increased by the effects of poverty and cold, and is almost sure to follow if the breed is neglected and exposed.

The development of bone, of course, requires nutriment, as well as any other part, though not perhaps in the same degree. Large bone, therefore, abstracts nutriment which would otherwise be more profitably employed and thus is anything but a desirable point in sheep. Horns, for the same reason, are much better dispensed with. Fine point in sheep, which is justly regarded as extremely favorable, is a soft, mellow feeling of the skin and parts beneath. These parts are the cellular, or rather adipose membranes, which in fat sheep are full of fat, and in lean sheep, when possessing this mellow feeling, denote the plentiful existence of these membranous cells ready for the reception of fat, which is deposited in them almost in the form of oil.

Breadth of loin and rotundity of frame are qualities that require no observation, having been above alluded to. The former denotes the presence of a large quantity of flesh in the spot where it is most valuable, and it also bespeaks a large and roomy abdomen. A round frame is also the sure attendant of a large abdomen, and an extended surface for the muscles of the back and loins. A general squareness of frame bespeaks large muscles, particularly from the quarters.

What, indeed, is wanted, in a good-formed animal, is as much flesh and as little bone and gristle as possible, and this flesh is required where it is most valuable; for instance, it is much more valuable on the loins and quarters than about the head and upper or scrag end of the neck. A large development

of flesh is pretty sure to be accompanied by a disposition to fatten; but for profitable feeding it is essential that these qualities should be developed early—constituting early maturity. Thus talks the *Prairie Farmer* on this important subject.

Gradually Improve Your Sheep.—It is a fact very few persons realize, that by the introduction of pure breed rams, there will be an annual increase of at least half a pound per fleece among a flock of ordinary sheep. "Could our average farmers be induced to believe this," says Mr. Goe, a noted Pennsylvania sheep manager, "sheep profits would soon become immense, compared with present pay." It does not matter where you buy those rams, but you ought to be certain to get pure breeds, from a good healthy flock. From one to three rams annually will not cost much money compared with the profit to your flock and the increased yield of fleece. You all claim to be enterprising and anxious to make sheep-raising *pay*, hence you will doubtless avail yourselves of the light and progress of others in your enterprise; for you live in a progressive age and ought to feel bound to keep on the track. Then it becomes you to open your eyes, look about you, see and read what your neighbors are doing. Catch the proper spirit and profit by all your learn from experience and the experience of others.—*Rural Sun.*

Domestic.

Learn to Keep House.

Beautiful maidens—aye nature's fair queens,
Some in your twenties, and some in your teens,
Seeking accomplishments worthy your aim.
Striving for learning, thirsting for fame;
Taking such pains with the style of your hair,
Keeping your lily complexions so fair;
Miss not this item, in all your gay lives,
Learn to keep house, you may one day be wives.
Learn to keep house.

Now your Adonis loves sweet moonlight walks,
Hand clasps, and kisses, and nice little talks;
Then, as plain Charlie, with burden of care,
He must subsist on more nourishing fare;
He'll come home at the set of the sun,
Hard-sick and weary, his working day done,
Thence let his slippered feet ne'er wish to roam,
Learn to keep house that you may keep home.
Learn to keep house.

First in his eyes will be children and wife,
Joy of his joy and life of his life,
Next to his bright dwelling his table, his meals—
Shriuk not at what my pen trembling reveals,
Maidens romantic, the truth must be told,
Knowledge is better than silver and gold;
Then be prepared in the spring-time of health,
Learn to keep house tho' surrounded by wealth.
Learn to keep house.

Chats With Farmers' Wives and Daughters---No. 6.

BY "JEWELL."

A TUSSLE WITH FLIES.

I have often wondered why a farm life should have so many drawbacks to its charms—the greatest of which is flies; but, as I did not live year in and year out on a farm—which condition, they tell me, is essential to a fair trial of poison and a gentle persuasion each morning with a cloth driver—why, I did not prove anything, only I wondered in my quiet hours why it was that city flies and country flies should differ so very materially. It is quite easy in the city to keep free from flies, if one *knows how and means business*—for you must bear in mind one thing, viz.: that flies *must* be eating. All right; give it to them—with a little cobalt with it—in plenty of dishes here and there, with beer or sweetened water, any way to invite them to eat and be merry, and they will surely die. After a few days of sweeping dead flies, brushing dead flies, shooing dead flies, and seeing dead flies you get used to it, and they either conclude not to come in, or else there are fewer flies in your neighborhood.

So much for city flies. But in the country where there are stables, milk and butter, and swill about to attract flies, they told me it would be impossible. So I am trying it, friends. One week ago, on the wall beside the table and upon the netting over the dishes as we ate would be black as if a swarm of bees were upon us. The reform began by removing the swill barrel to the barn yard. (I'd rather carry sour milk a mile than have so many flies looking at me eat.) I never leave anything for them to eat, but just what I want them to, with cobalt or fly-paper in it, but of that I give a plenty—three dishes to a room, one on each bed in the bed-room, leaving the room well aired and lighted. (I don't believe in dark rooms, except at night.) It seems as if there had been at least several millions of dead flies swept up, and at meals we miss fully that number—indeed, I feel a deep charity for the few left, and feed them regularly, and shall continue to do so right along all Summer. Don't be afraid of your children getting at the poison; teach them to let it alone, and, indeed, the dirty dishes are enough to disgust most all children, who usually like best what is pretty and nice.

Following are a few recipes which may be found useful:

TO COOK CRACKED WHEAT, RICE AND HOMINY.

I have before given a recipe for boiling cracked wheat, hominy and rice in a bag put in boiling water, which is not only easier and a cheaper way of doing—unless one has a waterbath utensil already to use—but I think the bag preferable; the rice keeps its form and cooks quicker, and cracked wheat, to be truly nice, should not cook more than twenty minutes, or three quarters of an hour at the farthest. You then have the full flavor of the grain, and something to *chew* also, which removes one serious objection to mush or cracked wheat, as it is usually served soft and gummy. Hominy should be cooked at least an hour, but cracked wheat and rice is better cooked in half the time.

SOFT GINGER BREAD.

One cup of molasses, 1 of cold water, 1 teaspoonful of salt, 1 of soda, butter the size of an egg, 1 spoonful of ginger, cloves or any other spice, flour enough for a stiff batter; bake an hour.

NANCY'S CAKE.

Two cups of sugar, 1 of milk, ½ of butter, 3 of flour, 2 eggs, 1 teaspoonful cream tartar, ½ teaspoonful of soda.

CREAM PIES.

Two cups of sugar, 1 of flour, 4 eggs, 1 quart milk; boil together and flavor to suit; put in crust and bake.

SPONGE CAKE.

Four eggs, 1 cup flour, 1 cup sugar, 1 teaspoonful cream tartar put in flour, ½ teaspoonful of soda dissolved in milk or water; flavor with lemon.

How to Cook Tomatoes.—Those who are fond of tomatoes will find that among the various modes of cooking them, none can equal in richness and delicacy, a dish of baked tomatoes. We are fond of them served in any manner, but the most delicious dish is produced as follows: To bake tomatoes, take those of a uniform size, smooth and ripe; wash and wipe dry; place them in a deep baking dish, a tin one if it is new; sprinkle salt and pepper over them, and bake in a brisk oven, not too hot, nearly two hours. Spread butter over them, and serve while hot.

Another way. Select thoroughly ripened fruit; cut them in halves; sprinkle over the cut half with bread crumbs, sugar, salt, pepper and butter. Place them in a baking pan, cut side upwards, and bake them in an oven for two hours. Serve on a plate garnished with curled parsley.

Broiled tomatoes can be cooked in less time as follows: Cut medium sized tomatoes in halves, and put them upon a gridiron, cut surface down. When the surface appears somewhat cooked, turn them, and finish the cooking with the skin towards the fire. The cooking should be gradual, so as not to break the skin. Place upon a dish, and put a little salt and a bit of butter upon each half, and serve quite hot.

How Many Farmers Live.—The State of Massachusetts, through her Board of Health, has been looking a little after the farmers of that State, and with regard to the diet of the farmers' families, publishes the following astounding report:

1—Good bread is scarce.
2—There is too little variety in food.
3—Meat is apt to be fried.
4—Baked beans and salt pork too generally used.
5—Pastry and cakes are used to an injurious extent.
6—Too little time is allowed for meals.
7—Coffee and tea are too freely used.
8—Water is used to excess.

The Board of Health make the following suggestions:

"There should be more fresh and less salt meat; less frying and more boiling, broiling and roasting; a greater variety of vegetables and fruits; less pies and cakes; more well-kneaded bread, raised with yeast; less tea.

"It is a somewhat singular fact that farmers live so little upon their own productions. They send their fresh vegetables, fruits, eggs, and poultry, to market, and live themselves upon salt pork, pies and saleratus.

"The poor cooking which prevails, doubtless results from *hurry*—frying requires but little time and skill, saleratus bread can be made in a jiffy, and the bread and pastry we eat are heavy and sodden, because kneading requires time."

It may well be doubted whether a more disgraceful picture could be drawn of any other nation in the world. Here we Americans are boasting of our skill and ingenuity, inviting to our shores the overworked millions of Europe and Asia, and yet living ourselves in a slip-shod, hand-to-mouth way, frying in grease half our food, fried ham, fried beef, fried potatoes, and not a civilized nation on earth but lives better. It insults our nostrils three times every day. The result is, one sees men sallow, stooping, sickly women more than in any other land under the sun. The active habits of the men enable them to overcome the dyspeptic influences of the everlasting *fry*; the women pay the penalty.

Raised Connecticut Doughnuts.—Heat a pint of milk just lukewarm, and stir into a small cup of melted lard and sifted flour, till it is a thick batter, add a small cup of domestic yeast, and keep it warm till the batter is light, then work into it four beaten eggs, two cups of sugar rolled free from lumps, a teaspoonful of salt, and two of cinnamon. When the whole is well mixed, knead in wheat flour until as stiff as biscuit dough. Set where it will keep warm, till of spongy lightness, then roll the dough out half an inch thick, and cut into cakes. Let them remain till light, then fry them in hot lard.

Shakespeare Cake.—Six cups of flour; one of sugar; one of rich cream; eight eggs.

Poultry Yard.

Dark Brahma Fowls.

THE Light and Dark Brahma fowls are among the most popular breeds of poultry known. Side by side, through their excellence alone, they have worked their way into public favor until no poultry yard is considered complete without one or the other of these varieties. As regards the merits of each, there are different opinions. One of our best poultry breeders, W. H. Todd, of Ohio, thus speaks of the Darks in an article in the *Northwestern Poultry Journal:*

For practical purposes we find little difference between Dark and Light Brahmas. The objection to keeping light or white fowls in town in consequence of their plumage getting soiled and dingy, is obviated with Dark Brahmas, as the dust, soot and smoke do not soil their color, and thereby injure their appearance. Comparatively we consider the Dark more vigorous and hardy, better foragers and earlier maturing. Their eggs are more fertile and the chickens seem hardier and more rapid in growth when small than any other of the large breeds.

In setting an equal number of eggs of different varieties in midwinter, the Dark Brahmas have hatched and lived, on an average, 50 per cent. better than any other. When matured, the best specimens are shorter in leg and more broad and stocky in shape than the Light, though we have seen first prizes given to leggy, long, round backed, ungainly birds, for what reason we could not surmise, unless it was for color alone, or else a *special favor* to their owners; but want of symmetry and style does not meet with public favor, and we hope it never will.

Many who keep poultry for eggs and market chaim that Dark Brahmas are the most profitable. The hens make careful setters and good mothers, and the pullets begin laying quite young and continue with scarcely a day's cessation for several months, and especially during the Winter, when eggs are high and "dunghills" are weather-bound. In annual product of eggs perhaps no variety excells them.

CLIPPING WINGS.—Clipping the wings of fowls to prevent their flying is a necessary operation sometimes, but never necessarily disfiguring. It generally is, however, since the farmer's shears almost always make a clean sweep of all the quills, and an ugly wing is the result. Besides the ugliness, there are also other disadvantages in such a sweeping operation. A setting hen uses the outer end of her wing to retain the eggs under her in place, and those near the body protect the skin from being torn by her mate's claws. The proper way is to only trim the feather partly off with a pair of scissors, except about one inch at the end. It shows but little when the wing is closed, and does not disfigure the fowl, and lets the wind through so as to prevent flying.

FRESH EGGS.—Eggs can be kept fresh and good for months by the following method: Place a convenient number in a small basket, and immerse them in boiling water, taking out almost instantly, then pack in salt with the small end down. By this process the entire surface of the white of the egg under the skin-like membrane, is congealed, thus forming an impervious coating, which prevents the evaporation of the contents, and the admission of air.—*P.*

VERY little corn should be fed in the grain, as the same quantity of grain converted into soft food, is worth one-third more than the grain, either for fattening or egg production, as all the force of the system required to digest or grind up the grain in the crop of the fowl, lessens the egg producing qualities or forces.

MANAGEMENT OF GEESE.—I take my pen to reply to Miss Heywood's inquiry about geese in *Rural New Yorker* of March 6. Geese are naturally great wanderers, and for that reason they require a home of their own; especially when harvest time approaches does this need most appear. If allowed to run they destroy much more than they are worth. A small piece of pasture land, through which runs a brook, is best calculated for geese; even if the brook is small, they will love it, and with sticks and leaves dam it up until they have a convenient place to wash and dive; they love to keep clean. Inclose their home with a good fence. During the laying season, which commences as early as March, feed corn, buckwheat, oats, etc.; if cooked and fed warm it is much better. Geese also dearly love crumbs from the table, such as pancakes and potatoes, cut into small pieces and fed warm; feed this once a day, and the above mentioned once a day, as much as they will eat without leaving any. A little salt in their food improves it; also a quantity of loppered milk, if you have it, added after the food is cooked.

If you have no nice little house for the goose to make her nest in, place a barrel in an elevated part of her lot or home, turn it on its side, place the open end of it toward the south; put in a few quarts of horse manure; over this place plenty of straw; she requires enough to lay her eggs upon and cover them with, for she never leaves them uncovered. My word for it, Goosie will not refuse such a place for her nest, at least I never knew her to. She generally lays two litters of eggs each season—from 5 to 12 in a litter. When she shows signs of sitting, give her from 10 to 13 eggs to sit upon; do not let her sit before the middle of April, or, better still, the first of May. Goslings are a tender bird and do not thrive well in chilly weather. After the goose has been sitting one month look out for the goslings; they are of a handsome green color; as they come out of the shell and sit close to their mother they are a pretty sight. About that time the gander will fight as if he meant to kill anything that comes near.—*Bernice Belter.*

SAVE THE FEATHERS.—As the time is drawing near when poultry will be killed in large numbers for market, large quantities of feathers are thrown away which, if taken care of and dried and sacked, could be put away for trimming in the Winter evenings. Then all the chicken and turkey feathers can be nicely trimmed; that is, take a pair of scissors and trim the plume or down from each side of the stem or rib of the feather. This down cut off, if put into a bag and kneaded for ten minutes, is eqal to the best soft goose feathers. Try it and make money out of the poultry feathers.

WEIGHT OF EGGS.—The *Canadian Farmer* says that after careful examination, it has been ascertained that the average weight of eggs was 22½ ounces per dozen, the largest ones weighing 28 ounces per dozen, and the smallest one 14¼ ounces per dozen. I have just had a dozen eggs from my Light Brahmas that weighed 32 ounces. Can any one beat this? The largest one weighed over three ounces.—*E. W. S., in N. W. P. Journal.*

AN OLD GOOSE.—William Atwood, of Big Flats, Chemung county, N. Y., has the old goose "Constitution" now in his possession, said to have been hatched in the year 1803. Her feathering is pure white, her weight sixteen pounds, and her *constitution* unimpaired.

Every man or woman in the land will admit drunkenness to be an evil if they are possessed of good sense, and yet a great many of them close their eyes to the great cause of drunkenness—bar-rooms.

When a man saves his cigar money to buy his wife a new bonnet, and the children new shoes, it indicates a spell of sunshine.

Thinking Farmers.

The opinion still lingers in the minds of many of the ignorant that any fool can be a farmer. Once the notion was universal. Any fool can follow a plow by holding on to the tail, and any fool can plant whatever and whenever he sees his neighbor planting. But to call this farming, or such unthinking animal a farmer, is to libel the first and noblest calling of man. The truth is, as the world is beginning to understand it, it takes as much brains, and brains of as fine quality, to make a first-rate farmer, as it does to make a first-rate specimen of any other business, learned or unlearned. Now we know that none but a man with a good share of live brains can make a first rate farmer.

A new era has been inaugurated in the farming world—the era of thinking farmers. The time has gone by when farmers live by main strength and ignorance. The strength is still needed, but it must be directed by thought. Henceforth, farmers will have to use their heads as well as their hands. The old dig and drudge, hap-hazard mode must give place to labor saving machinery, and an intelligent application of the laws of nature to the wants of the farm.

The first step, and the hardest, is for farmers to learn to think. It is always much easier to work than to think. Indeed, it is astonishing how little real thinking is done in this world, in the ordinary course of working life.

We are not disposed to quarrel with the general results of the system that prevailed under the old regime. Perhapa it was the best that the labor of that time was capable of working. Undoubtedly an immense deal of work was done, as the wealth accumulated was ample proof. But the work was almost exclusively that of man and mule muscles, and not at all the work of brains. But the day of exclusive muscle farming is passed. Henceforth there must be brain work as well. Machinery of all kinds must be called in to save labor. As a consequence, the labor that is used must be more intelligent, better skilled. But neither machinery nor improved labor can be introduced or used profitably, or with satisfaction, by unthinking farmers. Henceforth a farmer must not only know how to work himself, but how to direct others. He must be a man of thought as well as of action. He must study closely the climate and soil that he has to work in, and the markets that he has to depend on. He must have the relative values and adaptablities of the various crops and stocks to his farm, and farm with some definite purpose. He must study out and arrange for himself a rotation of crops adapted at once to the steady improvement of his farm and remuneration of himself and his laborers. And when this rotation is decided upon, he needs must keep his thoughts busy about the numberless little details that make up the current work on a farm. He must plan work ahead for all kinds of weather, so that no crop shall suffer for waiting on other work, that there shall be no conflicting crops; and all the time the farmer must be steadily advancing in knowledge as well as in experience; in judgment as well as practice. The fruits of such a system will be the manifold increase of all the products of the farm, and the elevation of the calling of the farmer to its legitimate rank and dignity.

For the full ripening of these fruits, we must needs depend on time and the young men. The best of the old farmers can but indifferently and with difficulty adapt themselves to new ways; while the majority of those who have passed the meridian of life must, of necessity, continue as they have begun. But in the young men of the farm we have full faith. They will catch the spirit of the age, and with a force of young blood, will develop the ground wealth of this goodly land beyond the most sanguine dream of any muscle farmer that ever lived. This is the work set for thinking farmers.—*Rural Sun.*

Pisciculture.

Self-Sustaining Fish Culture.

We understand any business to be self-sustaining when the necessary or reasonable amount of capital has been expended in its establishment, and the income pays a satisfactory dividend over and above all contingent or running expenses. For instance, it is very little expense to dam up a small stream, and stock it with bass, perch, bull-heads, and some other fish, as they spawn in and around the edges of the pond, and when hatched out will find their way into every nook and corner for protection—places unfit for young trout to live in. Thus perch fasten their spawn to weeds, roots, overhanging limbs of trees, etc. Their eggs are very small, and can no more be counted than the sand on the seashore. In fact they look in a mass like the white of a hen's egg. On the contrary, brook trout lay only a definite number of eggs, varying from 1,000 to 4,000 per pair, according to size and age. Nature has wisely provided them with the instinct of protecting them by burying them in sand or gravel, and if it was not for the fact that they spawn at different seasons (according to age), varying from September to January, and that the old ones lay their eggs first, and that those that come after often (I might say generally), in making their nests, dig up and destroy the first laid eggs, and also that after being hatched the young fry are exposed to numerous enemies, unless screens are placed over them. I say if it were not for these facts brook trout would increase indefinitely. Just figure up an increase of the lowest estimate that they ever spawn, say 500 per pair, and see how long it would take to have a million of trout. Well, now, it is not only possible, but practicable, to so protect the young fry as not only to make the business self-sustaining, but immensely profitable. In the first place, we are not in favor of ponds at all for raising trout for market, as many can be raised in a stream dug deep and wide in the form of canals. Thus the water can be regulated at will.

The only good reason for making ponds is for use by a club for private fishing with a boat. One other reason may be valid in the interior, where feed is expensive. Ponds encourage the growth of insects, and a large number of trout will not only live but grow fat, especially for the first few years, without any other food than what nature provides, as I have learned by experience; but near the sea shore, especially in this vicinity, feed does not cost one cent per pound, so that making ponds here to raise feed is not advisable. It is said that trout will not increase in ponds. This is true, that is, if the springs are all choked and the bottom is all mud. If trout can't find sand or gravel to spawn in they will not spawn at all, any more than a hen will lay when shut up in a dark cellar, or any more than wild animals will breed shut up in a cage. Nature does not do business in that way. A pond raised to its fullest extent, so that no water runs through the flume, will grow fat trout (if sustained by springs), but in that case you will have to buy the young every year to replenish the pond.

To make the pond not only self-sustaining but highly productive, you must not choke the head springs, but dig shallow canals, say two to four feet wide, board the sides, put in gravel, if not there already, and, if you wish to save all, put galvanized wire screens on acanthing, and put coarse gravel on these screens, four to six inches deep. Then when the trout bury their eggs in the ground, they will fall through the screens, and can't be eaten up or destroyed. The mesh in the screen should be five-eighths or one-half inch; put on the gravel and work all the fine through; one inch space between the screen and bottom bed of gravel is all sufficient. Now let in your trout and they will do the rest. Two inches of water is sufficient. If you have not this, put in a board and raise the water. The trout will scale any waterfall in spawning time, if it is five feet high. On this plan it is safe to let the trout remain all Winter, or until they begin to hatch, which, in this latitude, is about April 1 to June 15. It takes about sixty-five days for trout eggs to hatch in this latitude. Of course, the variation in hatching is the same as in spawning. But before the trout begin to hatch the old ones must be removed, and within sixty days after hatching take up your screens and put them on top of all the gravel. Now your young fry are perfectly secure against all intruders. Feed according to numbers and flow of water. The expense the first year is a mere nothing.

I have given directions for feeding heretofore, and I will simply say a spoonful of hopped milk will feed 1000 a day. For the first six months dilute it in a bowl of water and flirt it in with a quill; blood from liver is good. Never feed enough to foul the water. Thus, after things are perfectly arranged, the machine will almost run itself, and six inches of water will produce more clean money than a large farm. I said certain kinds of fish will replenish a pond without any trouble whatever. At the same time their market value may be eight to ten cents per pound, while brook trout average, if fat, fully $1 per pound. I mean Long Island trout, for it is a notorious fact that our trout bring about double the price in the New York market that any others do.—*A. J. Hinds, in New York Times.*

Hygienic.

Insulated Beds.

An insulated bed is one set on some non-conductor of electricity, so the electricity cannot flow to and from it freely. Their usefulness is as yet a matter of experiment. Their value might be tested by invalids, at little expense, for an insulated bed can be made by placing the four feet on strong glass tumblers. Dr. Wagenhols, of Columbus, Ohio, recently read an article on the subject before a medical society, detailing many cases of acute rheumatism which had been benefited by sleeping on an insulated bed. We quote:

"On December 25th, 1871, I was attacked with rheumatism of the ankle and knee joints in one limb, then the other. I treated myself actively by alkalies, opiates, etc., in the ordinary manner recognized by the profession as of most value in this disease. I was unable to leave my bed for three months, could not walk until April, 1872, and did not fully recover until the warm weather in June. On the 16th day December I was again assailed by my tormentor, treated myself as before, 'and I thought myself happy' that I was able to be out of my room in eight weeks, privileged to hobble around the streets of the city with the aid of a cane. Warm weather restored me to health, and during the Summer and Winter I attended to my professional duties. On February 15th, 1874, while I was congratulating myself that I should escape my annual attack, I was suddenly seized in the night time with severe pain in both ankles. In the morning I failed, after an ardent effort, to leave my bed. Fever was intense, as also the swelling of ankle and knee joints. A sense of coldness of the lower extremities existed, which was even more distressing than the pain caused by the swelling of the joints. This condition continued until the morning of the 18th I *insulated* my bed by causing the legs of the bedstead to be placed in four glass tumblers. I fell into a profound sleep, wakening in the morning of the 19th bathed in a profuse perspiration, without the aid of anodynes. I steadily improved, and in a few days was out of my room."

This single case is of little consequence, but the doctor gives a large number of others corroborating it. How much is due to insulation and how much to the expectation of a cure, we cannot tell.

The closing part of Dr. Wagenhols' paper is suggestive, and we quote it:

"One of the patients makes mention of the sensation of drowsiness which came over him by the prolonged use of the insulated bed. This I have noticed in several cases, and distinctly observed it in my own. Now the question is, do the effects of this form of treatment, which in comparison with our former modes, is simply marvelous, depend upon expectant attention? Is it another specimen of the wonderful power the mind has over the body? It certainly deserves attention, as, in either case, the patient is benefited, and this is the end of all therapeutics.

"I have in my possession several communications from gentlemen of worth and eminence in the profession, who fully corroborate my experience in the particulars set forth; and I am confident that if this subject, which I deem important to the profession as well as to the community, is properly tried and thoroughly investigated, much information will be gained and large beneficial results will be accomplished.

"We live to learn; as we learn we advance in knowledge, our information and attainments expand, and thus our usefulness is made felt in communities in which we reside, and our vigor and energy is undaunted, by reason of the good results we obtain."—*Herald of Health.*

The Evils of Alcohol and Tobacco.—Maria H. Holden, of Waterville, Minn., has this to say on the subject.

Alcohol is carrying down to disgrace, poverty and destruction many of the most talented men in the country. It is carrying toward destruction multitudes of the brave and noble young men in our land. All the crimes on earth do not destroy so many of the human race nor alienate so much property as drunkenness. In the United States 133,000 places are licensed to sell spirituous liquors. In these dram shops 390,000 persons are employed. If we add to these the number employed in distilleries and wholesale liquor-shops we shall have at least 570,000 persons employed in sending their fellow mortals to premature graves. Crime is mostly caused by drunkenness. Criminals are an expense to the United States of $40,000,000 per year.

But alcohol is not doing all this without the aid of its companion, tobacco. Yes, tobacco has utterly ruined thousands of boys. A boy who smokes early and frequently, or in any way uses large quantities of tobacco, is never known to make a man of much energy, and generally lacks ambition and mental power. Therefore we would warn boys who want to be anything in the world to shun tobacco as a most baneful poison.

Don't touch it in any form; it does no good, and a very great deal of harm. You cannot properly be called a gentleman so long as your lips are saturated with a disgusting poison. Would a gentleman poison the air with sickening smoke, or deluge the floor with liquid filthiness? Never. Tobacco enfeebles the mind; it makes a man old and nervous. As it is an intoxicant, it exerts a special influence on the brain, and by weakening the nerves produces excitability.

Young men, you *last*, you *chiefest*, let me implore you whose precious precious it still is to make life long by commencing the performance of its duties early. Where lie your own welfare, your own honor, your own blessedness? Lie they not in that future course of life which is to flow out of your own minds and hearts, and which your own hands are to fashion as the temple is fashioned by the builder?

Remember, boys, you need not expect to enjoy a life of usefulness if you begin by loving the tobacco pipe or whisky bottle.

Excitement and Short Life.—The deadliest foe to man's longevity is an unnatural excitement. Every man is born with a certain stock of vitality, which cannot be increased, but which may be expended rapidly or husbanded, as he deems best. Within certain limits he has his choice, to move fast or slow, to live abstemiously or intensely, to draw his little amount of life over a large space or condense it into a narrow one; but when his stock is exhausted he has no more. He who lives abstemiously, who avoids all stimulants, takes light exercise, never overtasks himself, indulges no exhausting passions, feeds his mind and heart on no exciting material, has no debilitating pleasure, lets nothing ruffle his temper, keeps his "accounts with God and man duly squared up," is sure, barring accidents, to spin out his life to the longest limit which it is possible to attain; while he who intensely feeds on high-seasoned food, whether material or mental, fatigues his body or brain by hard labor, exposes himself to inflammatory disease, seeks continual excitement, gives loose rein to his passions, frets at every trouble, and enjoys little repose, is burning the candle at both ends, and is sure to shorten his days.

Women.

Baby Drunkards.

In his recent lecture on temperance to the ladies of New York, Dr. James Edmunds, of London, made a horrible, and, we suspect, a perfectly truthful statement, respecting the manner in which the teachings and prescriptions of medical men are filling the nations of the earth with imbecilea and drunkards. We fear the statements of Dr. Edmunds are as applicable to many American cities as to London:

A very large majority of the ladies of my own acquaintance on the other side, who are a fair example, perhaps, of the ladies living in London society, have acquired the habit of using wine, table-beer, stout, and frequently whisky and brandy to a large extent, I think, owing to the mistakes on the part of my own profession in the advice which they have given. The result is that the babies of the present generation are never sober from the earliest period of their existence until they have been weaned. This is a shocking statement for me to make, but I should not be doing my duty here unless I were to make it as broadly and strongly as that. It is a simple fact. The mother's blood, practically, is entirely in common with that of the child. You know perfectly that if a mother takes even an ordinary dose of such medicine as caster oil, it will very often affect the baby more than it affects the mother; that one has to be exceedingly careful in prescribing for mothers simply on that ground. Now, what does that simple fact, with which all you mothers are familiar, show? Why, it shows this: that the soothed condition of the baby after the mother has taken half a pint of beer, is really the first stage of drunkenness in that child. When I hear a mother telling me that whenever she takes a little whisky and water or brandy and water, because the child is fractious, and she finds that her milk agrees with it better, I am obliged to ask her if she knows what she is doing—if she knows that she is simply making herself the medium for distilling into her babe's system almost the whole of that spirit which she takes into her own, and whether she is aware that that soothed condition of the child is really the first stage of drunkenness. The fact is, the baby is only the infinitely more sensitive extension of the mother's system; and it is more likely than any other part of the mother's system to receive the things that are injurious that are taken through the medium of the mother's diet. Well, now, ladies, bear that in mind when you are told to take wine, or beer, or brandy; understand that you are merely distilling that wine, spirit and beer into your child's frame; that the very mould which that child is to preserve for the rest of its life is being constructed out of blood that is alcoholized—out of a condition of the system in which intoxication is the real substantial element for the first twelve months of its growth. I ask those of you who may have thought it your duty to recommend young women who do not know better than to take those things, whether that is not a grave and important fact for you to think of? And who is there among us whose duty is less than that of a woman? It is said that the man is the head of the household; but all women who are worth anything practically, stand at the helm and guide their husbands by a silent influence which always asserts its sway, if she is a wise and good woman. Look at the influence which a woman can exert over her husband, who is often weaker than herself in those matters, for he has to come in contact with men of the grossest and lowest natures in trade and out in the world. Just ask yourselves if it is not the duty of women always to refine and ethereal-ize man, and she does so if she be a good, true and noble woman. Look, again, at the influence which woman is to have upon the next generation. Who is it that is to make the next generation? Is it the men? No; it is the women. It is the everyday life of the mother that forms the mind of her son, and that forms the very instincts of her daughter, up from eight, nine, yes, to almost any age, while she has unalloyed influence for the first ten years in framing the constitutions and in moulding the minds of those children, though, perhaps, we do not always realize this truth so fully as we might.—*Science of Health.*

The Gentle Dignity of Woman.—There is in particular, says the *Saturday Review*, that soft dignity which belongs to women who are affectionate by nature and timid by temperament, but who have a reserve of self-respect that defends them against themselves as well as against others. These have a quiet dignity, tempered by much sweetness of speech and manner, that is the lovliest kind of all, and the most subtle as well as the most beautiful. They are like the lady in Comus, and seem to cast the spell of respect on all with whom they are associated. No man, save of the coarsest fibre, and such as only physical strength can control, could be rude to them in word or brutal in deed; for there is something about them very indefinite, but very strong withal, which seems to give them special protection from insolence; and a loving woman of soft manners, whose mind is pure, and who respects herself, is armed with a power that none but the vilest can despise. This is the woman who gets a precise obedience from her servants without exacting it, and whose children do not dream of disputing her wishes; who, though so gentle and affable, stops short of that kind of familiarity which breeds contempt, and with whom no one takes a liberty. For this, one can scarcely give a reason. She would not romp or rave if she were displeased, she would not scold, she would not strike; but there is a certain quality in which we may not be able to familiarize, yet which would make us ashamed to pass beyond the boundaries of the strictest respect, and which restrains others less critical than ourselves as certainly as fear.

Woman's Spending Money.—Do men ever consider the business relation which man and wife sustain toward each other? Do they ever look at marriage as a partnership, in which the wife is an equal member, entitled to her just share of the net profits? I know they do not. And yet, the true, loyal wife has her full share of the duties to perform, and sometimes more than her share.

There is nothing which a wife, and more especially a young wife, hates to do more than to ask her husband for money, even though it be but a dollar or two. It is humiliating to be compelled to beg for pin money, or four bits to buy a ribbon for her hair, or a few buttons, or a few yards of muslin. A woman sees many little things in the store which she would like to have, and which would not cost as much as a man's cigars for a single day, but she sighs, and resolves to do without, rather than ask for the money. Perhaps she secretly resolves to take in washing, or sewing, or do some kind of fancy work in order to earn a little money of her own, to do with just as she pleases.

This is not always owing to the man's stinginess, or to his lack of means, but oftener to his forgetfulness and want of care. It is true some women are extravagant, and would spend the money foolishly. But no true wife would go beyond her husband's means, and I may, I think, assert that as a rule, women are more economical than men. If we see a mechanic's wife with a new, fine bonnet, we open our eyes and say what extravagance! But do we consider that probably the man who professes such astonishment smokes that amount away in a week or two, and no remark is made of that? A woman pays three dollars for a pair of shoes, while her husband has a bill in his pocket for a ten dollar pair of boots. A woman pays twenty dollars for a very nice suit, and makes it up herself. Her husband pays thirty or forty for a fine suit, and thinks he got it very cheap. So that after all, a woman can dress well, and yet not spend as much money as a man.

But what I was going to say is, that men should remember the partnership existing, and after the company expenses are paid, call in the other partner and declare a dividend. Give the wife her share of the profits, and I will guarantee that she not only clothes herself and her children in good style, but will lay by something for a rainy day.—*Minnie Carrol.*

The Society of Women.—No society is more profitable, because none more refining and provocative of virtue, than that of refined and sensible woman. Her beauty will win, her gentle voice invite, and the desire of her favor persuade men's sterner souls to leave the path of sinful strife for the ways of pleasantness and peace. But when woman falls from this blest eminence, and sinks the guardian and cherisher of pure and rational enjoyments into the vain coquette and flattered idol of fashion, she is unworthy of an honorable man's admiration.

We honor the chivalrous deference which is paid in our land to woman. It proves that our men know how to respect virtue and pure affection; and that our women are worthy of such respect. Yet woman should be something more than mere woman to win us to their society. To be our companions, they should be fitted to be our friends; to rule our hearts, they should be deserving the approbation of our minds. There are many such, and that there are no more is rather the fault of our own sex than their own; and despite all the unmanly scandals that have been thrown upon them in prose and verse, they would rather share in the rational conversation of men of sense than listen to the silly compliments of fools, and a man dishonors them, as well as disgraces himself, when he seeks their circle for idle pastime, and not for the improvement of his mind and the elevation of his heart.

The fences of the United states are said to be valued at upwards of $1,800,000,000, and it costs every year more than $98,000,000 to keep them in repair.

The qualities that make the ladies and gentlemen are qualities of the soul, and there is no monopoly or exclusive right to these.

FINE MERINOS—FINE POULTRY—ETC.

We have visited the Watkins farm, Santa Clara, to look at the fine sheep which our readers will notice advertised in this issue. Mr. Watkins is better known as a fruit-raiser than a fine stock man, having for many years been engaged is growing a fine orchard and vineyard and producing excellent fruit. His farm adjoins the large and noted Gould orchard, and also the fine park belonging to Mr. Pierce, which everyone who has visited Santa Clara will be likely to remember.

There are few finer places in the State than Mr. Watkins' farm, and probably no better sheep than the thoroughbred Merinos he is breeding. We examined the fleeces of many of his rams, and finer wool cannot be found. The sheep are all remarkably fine, healthy, strong and lively, but docile and good natured. It is wonderful how select breeding will cover the entire limbs and body with superior wool. Some of these sheep have heavy wool from the very tips of the feet to the ends of their noses. The pastures and yards and sheds are all conveniently and well arranged for the business of breeding sheep, and Mr. W. we found to be an enthusiast in his favorite employment. The prices of breeding rams range from $30 to $60 each; ewes about the same price. The pedigrees of these sheep are excellent, as can be seen by the statement made in the advertisement.

We are pleased to observe a growing interest manifested by our farmers generally in all sorts of fine stock. But as much as we were entertained by Mr. W. and with his magnificent herds, he could not monopolize our entire attention while Mrs. W. was anxious to have us take a look at her

FANCY FOWLS.

As we walked with her from yard to yard and noticed how much interested she was in the chickens, old and young, how well she understood their natures and wants, and how kind and almost motherly she was to her pets, we wished that those persons who know this lady-like woman only as a leading "woman's righter," and who imagine her to be "unsexed," as the term is usually applied, could but observe her at home, that they might form a truer estimation of her womanly character and disposition. It is not for us to criticize or make remarks about any one, but we will say, on general principles, in vindication against common prejudice towards ladies who favor giving the franchise to their sex, that we have almost invariably found them in their domestic relations to be refined, intelligent, and the most womanly of women, with enough of good sense to be able to manage a kitchen, rear a family of children, and make home attractive outside and in.

Mrs. W. has silver spangled Hamburgs, the prettiest chicks to our notion in the world, and hardy breeders and good layers. Also White Leghorns and Brown Leghorns, said to be the best layers in the world. They are active birds, and do best where they can have a wide range. Two Leghorn hens, by themselves, have laid since February 12 to May 21 eight dozen and ten eggs, or about an egg a day on the average. This breed is non-sitting. They will cluck a few days after laying a litter, but do not offer to sit, and soon commence laying again. Two Brahma hens, in the same time laid five dozen and eight eggs, or only about five-eighths as many as the Leghorns. Here we saw the smallest Bantams that we ever noticed. They are good layers, producing eggs about half the size of common hen's eggs. They are a very pretty fancy fowl, and stand upon their belligerent dignity till other fowls let them alone. We will not forget to mention the Aylesbury ducks, pure white, which are remarkable for laying and growing. They will average one egg a day eight months in the year, with plentiful feeding. The young get their growth in four months. Mrs. Watkins believes in and practices full feeding for all her fowls, keeps the yards, roosts and coops clean, gives clean water, and keeps the choicest birds of each sort separate for eggs for pure breeding. The rest are allowed to run together and the eggs are sold as ordinary market eggs. Her prices for the finest fowls are $10 a pair.

Mrs. W. keeps a record of all eggs laid, and expenses as well as income, and thinks that she can demonstrate that it pays to keep good fowls and to keep them well.

ECLIPSE WIND-MILL.

Several of these mills have been erected in San Jose, and are proving to be just the thing. They are probably as perfect self-regulators as were ever invented, and have stood the test for many years. Mr. I. A. Hatch, the agent here, has engaged a good many mills. We went with him out to Mr. G. W. Tarleton's orchard to see a fine mill erected on his place. It was doing splendid work, and Mr. Tarleton, who is himself a natural mechanic and knows what is and what is not practical, is much pleased with it, and requested us to recommend this as the very best self-regulator made. Mr. Chas. P. Hoag, Nos. 18 and 20 Fremont street, San Francisco, is the general agent for this State, and Mr. Hatch, of San Jose, for Santa Clara county. They attend to the erection and fully warrant the mills and their own work. Nearly every farmer needs a good wind-mill, and now this dry season is the time to get a good one.

GOODENOUGH.

There is one institution lately started in San Jose that every one of the farmers and horse owners in this valley should hail with gratification. It is the Goodenough shoeing shop, on Santa Clara street, between First and Second streets, where horses are shod without spoiling the feet—where, in fact, a perfect shoe in every respect is put upon the foot of a horse in a perfect manner. Every horse owner knows that hundreds of good horses are every year nearly ruinsd by careless or ignorant shoers, and that many of the "crack shoers" are more conceited than wise. It is a mercy to a horse to have his feet correctly shod, as it is cruelty aggravated to cramp and ruin his feet by the old, imperfect method. Although called new, the Goodenough method has been thoroughly tested, approved and adopted by every society for the prevention of cruelty to animals that has investigated the subject, also by the United States army, and whoever has once tried shoeing by this method will never again go back to the old way, for it is not only in accordance with the anatomy of the horse's foot and true principle, but in practice has been found to be the best, and the only perfect shoe and system of shoeing ever invented.

GOOD DAIRY STOCK.—Mr. W. A. Z. Edwards of San Jose, who is a lover of fine cattle, has a small herd of choice Jerseys, one fine four-year-old bull and several cows. While speaking on the subject of keeping a good class of milch cows, he had occasion to refer to the notes of his farm book. One item we asked the privilege of copying, in substance, to wit: The amount realized in one year from the sales of butter from seven cows, after supplying the wants of the family, was $634 23, and from the sale of seven calves the same year, $353, making $987 23 as the product of seven cows in one year. Who can beat that?—*Cor. Rural Press.*

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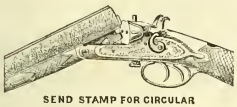

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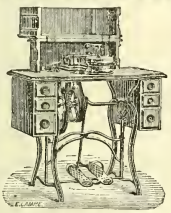

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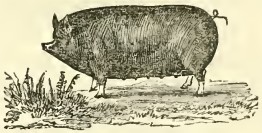

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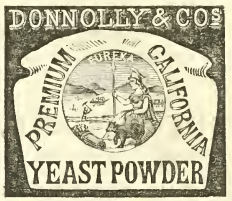

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Volume 6. Number 7.

JULY.

CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL

Subscription Price, $1.50 a year. | SAN JOSE, CAL., JULY, 1875. | Single Copies, 15 cents.

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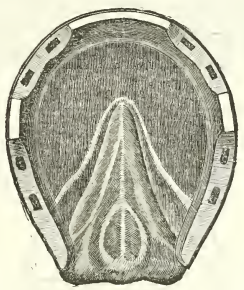

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The California Agriculturist
AND
LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., July, 1875. No. 7.

AIDING PARTURITION.

Almost every farmer who owns cows has, on one or more occasions, to render some aid and assistance to them during calving time. Some persons, with mistaken modesty, may regard this as a subject too delicate to be treated on in a newspaper. While we believe in true modesty and propriety, and take pride in allowing nothing in the AGRICULTURIST AND LIVE STOCK JOURNAL but what is both pure and first class in sentiment, we, at the same time, confess that we are not qualmish about speaking upon a subject of importance where the truth should be known, that practice may be according to nature, and result in benefit instead of injury. There is a lamentable degree of ignorance among people generally, upon many important subjects, which must be attributed mainly to a false feeling without comprehensive reasons.

This month (June) we had a case thrust upon us wherein our duty was plain, and aid was necessary to save the life of an animal and to relieve her of severe suffering. We will write up the case and offer such suggestions as we believe will be of value to whoever has to undertake a similar act of charity or duty.

The cow was quite old and not very strong, although, having been kept on good pasture, was in fair condition of flesh. She was not expected to have a calf soon, and strayed away and was out of the herd some twenty-four hours before her absence caused alarm. When found, she was lying in the dry bed of a creek, and so exhausted from severe protracted labor that she was unable to raise upon her hind feet. She could, and did, frequently try to arise, and would shift from lying upon one side to the other. The nose and fore feet of the calf only was in sight. The circulation of blood through the placenta from the mother to the fœtus had ceased, and as the connection was broken the calf died from suffocation, its tongue protruding from its mouth. The paroxysms of labor were fearful, and called out every feeling of sympathy. Her strength was being rapidly exhausted, and so weak was she that nature, unaided, was unavailing. Immediate assistance was imperative. What to do was the all-important question. Pulling off the coat and rolling up the sleeves took but a moment. And grasping the projecting feet and pulling with full force *when the cow strained, and easing up the moment* she let go her breath for a rest, was what we did, and just the best possible thing to do.

Here is an important point to be borne in mind, and we particularly request every reader to remember it: Never pull excepting to aid labor; always slack up the moment the muscles of the mother relax. The powerful abdominal muscles are all exercised at every throe or pain, and not a muscle in the whole body but what becomes rigid in sympathy to assist. Then after a moment of terrific effort the muscles must again relax to regain force through rest for another effort. One, without knowing any better, would most likely keep up a steady pulling strain, irrespective of nature's efforts. Here is where the great danger is. Many cows are ruined by such mal-practice. The muscles are over-strained without power to relax, and there is much danger of serious ruptures unless the assisting strain is relaxed whenever the labor relaxes. The common opinion that it is dangerous to assist a cow during parturition arises from the want of understanding on this point, and from a constant strain instead of a surging, not jerking pull to aid nature in her efforts.

In this case, our unaided strength was only sufficient to bring the calf's shoulders in sight. We were alone, and a long distance from help; so we went to the house, got a bucket of water, a halter rope, and a strong stake, six feet long, with one end pointed. The water was for the cow to drink, which she did most gratefully. The rope we slipped over the calf's head, and making a loop in the other end slipped it over the stake. By sticking the stake into the ground for a leverage, we could pull as much as three men without it, and with comparative ease. In a few throes the hind feet of the calf were brought in sight. (The hind feet are, or should be, always in the position as when lying down.) We then changed the slip from the neck to the hind feet, and one more throe relieved the cow.

In this case, the cow bore twins, both dead, of course. Our assistance was again needed, but little force, however, was required to finish up the work, the placenta, or cleanings, following the last birth.

While using the stake leverage, we once or twice strained steadily after the throes had relaxed, and observed the effect. Pain immediately followed pain, and great distress and exhaustion to the cow was at once apparent. Again we say, bear in mind that it is dangerous and wrong to strain steadily. Only act in conjunction with natural labor. Also, please remember to attach a rope to the hind legs of the calf as soon as it can be done, as this is the easiest way to accomplish the work.

The after treatment was bran mash, one quart of bran to a bucketful of water, and all she would drink. As the weather was hot, and the cow lay in the sun, we did not try to give it very warm; simply scalded the bran first, then poured in water cold. After a while we carried a sack of hay, and at night, by coaxing her along with a wisp of hay, enticed her to the stable, where she can have the rest she most needs in comfort.

We cannot conclude this article without giving credit where credit is due, viz.: to our good wife, who has had the advantage of a medical course of education, and understands practically a good deal about obstetrical cases. Her advice was solicited, and our success in this case largely depended upon it, as does the information we have been prompted to give above.

TO OUR FRIENDS.

The first half of Volume 6 of the CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL, is now issued. The Publishers, who are working faithfully to make just such a journal as is needed on the Pacific Coast, and who expect soon to make greater improvements in its appearance, send greeting to all friends, and ask each one to use his or her endeavor to increase its subscription list, by getting one or more new subscribers.

As an inducement, we will commence *new subscriptions* for 1876 NOW, or at any time between now and January, which will allow several copies over a year as a *direct premium* to new subscribers who pay $1.50 in advance.

Show numbers of the CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL to your neighbors and friends, and *if you believe it*, tell them it is just the paper that they want and should have; adapted to our California climate and culture, cheap, in convenient form for reading and preservation, practical, reliable, instructive, social, progressive, pure in moral tone, and really entertaining.

No more generous offer was ever made by any journal to new subscribers. We have been often reassured that there are many thousands of persons on this coast who would not consent to do without the AGRICULTURIST if they once subscribed. "Do by others as you would be done by," is the rule. Advise as you would be advised, and we will be grateful for every favor and endeavor to be true to our obligations.

FIRE INSURANCE.

Mr. J. A. Clayton, real estate agent, has been appointed agent for several first-class insurance companies. He is well-known in this county as a business man, and we advise any of our readers who contemplate insuring to call and see him at his new office, 290 Santa Clara street, in the Farmers' Gold Bank building.

George B. Harmon, lately from the East, has bought out the grocery business of C. A. Hough, who retires, as see per advertisement on first page. Mr. Holloway, who started the store, has now a position on the S. F. *Post*.

The Missouri *Democrat* states that a farmer mer in Johnson county, Kansas, caught 24 bushels of grasshoppers in two days upon his farm.

Benj. Casey. S. H. Herring.

California Agriculturist

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EDITORIAL NOTES.

Save the straw and chaff, stack or cover it in a safe place. It will be needed after the first fall rains destroy the dry feed. If you have no stock of your own, you can make money by saving the straw this season. And so long as it will be needed, it is wicked to burn it, as has too long been the custom.

The young man who inquires what sort of trade he can learn, or business he can go into, where he will not meet with enough competition to discourage him, is advised to learn how to practice strict honesty and integrity through life in every respect. He won't be likely to find enough *competition* among mankind generally to hurt him or discourage him in this practice very much.

The fruit crop is short this season. Our principle orchards will not produce over half to two-thirds of a crop on an average. The severe spring frosts caused many apples and pears to fall before they were half-grown, by injuring the fruit in blossom. All kinds of fruit have commanded higher prices than for several years before. The prices in the markets are so high as to debar poor people from purchasing.

The San Jose fruit-canning factory (Dawson & Co.) seems to be doing a large business. They were employing some 135 persons putting up apricots the day we visited the factory. Their fruit costs them on an average about twice what it did last year. But they have established a reputation that demands all they can put up—and, we are glad to say, have done so by deserving it. The Alden factory will probably not do much, as there will be but little fruit to dry.

This month has added another new correspondent to the Household and Domestic columns of our journal. We wish the farmers would take as much interest in other departments as the wives and daughters do in theirs—or at least were as good at corresponding. But we are glad the ladies are bound to have a good paper, and we are determined to encourage them, for the best part of every farm is, or should be, in and about the house.

The late rain did more injury to the dry feed in stubble fields and pastures than to grain and hay. The dry feed in our climate is of as much importance as are the green pastures of the Atlantic States. Grass dried up very early this season, and the two days' rain dissolved away much of the gum and and sugar, the soluble portion of the feed, but it did not rot the feed as badly as a long continued rain would have done. Another rain would set the stock to hunting for something to eat.

And now politics run high. The popular and reform ideas of the people find expression through "platforms." Whether politicians will continue to delude the people, as they have always done, by reiterating the demand for reform; or whether the people, as they should do, will throw politicians overboard, and vote only for modest, good and pure men, irrespective of party, remains to be seen. You have the tables spread before you, and can swallow the whole bills of fare or take your choice of the dishes. It is your own stomach, not our, that you must consult.

An Act Concerning Roads and Highways in Santa Clara County—a 19-page pamphlet—contains much that will be found interesting to the public. It can be found on our table by those wishing to see it. We quote the following:

No stock of any kind whatever shall be allowed to pasture upon any highway.

Any person or persons who shall wilfully cut down or injure any living tree planted or preserved as a shade or ornamental tree, either in or upon the border of any public road, shall be guilty of malicious mischief.

Persons causing water to flow upon or impair any public highway shall be guilty of a misdemeanor.

A road not worked or used for a period of five years ceases to be a highway.

Colt-Breaking. — During the last two months we have been stopping on a farm some five miles from town, and have had occasion to break four different horses to the saddle—the last one a wild colt. It is a little risky, unless one takes every advantage of the horse, instead of being taken advantage of by him. The nature of the horse we have made a practical study for many years. If only one side of a horse is trained, he will be as wild on the other side as though he never knew training. If you gentle three of his legs and neglect the other one, don't take hold of the uneducated leg too confidently. Every motion, every word that you wish the horse to know or be familiar with, must be repeated, gently, but firmly. Get the horses confidence first, then keep his confidence with kindness and consistent treatment; and remember that the horse knows just what he learns, good or bad, and no more, and he remembers every trick, good or bad, also, that he ever learns. It is easier to educate a green colt than to break an old horse of bad faults.

It is said that bad luck runs in streaks. It does look like it sometimes. We have known several cases where misfortune followed misfortune, which the recipients thereof could in no way foresee or avoid. We do not regard such things as always sent for punishment, but are willing to accept the theory that even evils can be made to subserve a good end if we do not succumb to them, but with a high faith in the power of right, put forth energy of goodness to triumph. The soul's growth in weathering great trials is better than riches, more lasting than friendship, and as eternal as life eternal itself.

A WORD TO OUR YOUNG FOLKS.

A happy greeting to all. We wish to become better acquainted with you, and to enable you to form an acquaintance with each other through these columns, in order that you may assist each other in attaining an elevated plane of civilization and usefulness. We invite you all to write short aricles for the Boys and Girls Department, and to take a special interest in its success. Tell us where you live, what you are doing, and how you are doing it, in as plain language as you can use. Keep your eyes and ears open. Strive to understand the cause of things. In conversation and writing, select the best words, reject all slang phrases, and strive to learn the true definition of words. There is no study that will aid you more fully in becoming a good talker, speaker or writer. Shun all bad habits and practices, especially drinking intoxicating liquors, the use of tobacco, profane and vulgar language, etc. These things, to say the least, will not elevate and refine either young or old, and in very many instances demoralize and degrade both old and young. "Avoid the appearance of evil," is a safe injunction. Be kind, truthful and courteous at home and at school, and when you enter society you will become useful, beloved and respected by all.

Uncle Ben.

A DESERVING YOUNG MAN.

Our readers will notice that Mr. Gaston has entered into co-partnership with Dr. Menefee, dentist. Several years since, the young man entered Dr. Menefee's office as student and assistant, and it speaks well for him that he has so gained the esteem of his employer. Any young man might be proud of such a connection. Menefee & Gaston have already the confidence of the public as first-class dentists, and are as well prepared to give perfect satisfaction in dental work as any dentists in this State.

A great temperance revival took place lately in the Catholic church of Council Bluffs, Iowa. Many could not gain admittance. In response to the fervent appeal of the priests, over four hundred and fifty signed the pledge, and the work is still going on.—*The Western Weekly.*

Subscribe for the Agriculturist.

Poetry.

Don't Leave the Farm.

COME, boys I have something to tell you,
Come near, I would whisper it low;
You are thinking of leaving the homestead,
Don't be in a hurry to go.
The city has many attractions,
But think of the vices and sins!
When once in the vortex of fashion,
How soon the course downward begins.

You talk of the mines of Australia,
They're wealthy in gold, without doubt,
But, ah! there is gold in the farm, boys,
If only you'll shovel it out.
The mercantile life is a hazard,
The goods are first high and then low,
Better risk the old farm a while longer—
Don't be in a hurry to go.

The great, stirring world has inducements,
There is many a busy mart,
But wealth is not made in a day, boys,
Don't be in a hurry to start,
The bankers and brokers are wealthy,
They take in their thousands or so;
Ah! think of the frauds and deceptions—
Don't be in a hurry to go.

The farm is the safest and surest,
The orchards are loaded to-day;
You're free as the air of the mountains,
And monarch of all you survey.
Better stay on the farm a while longer,
Though profits should come rather slow;
Remember you've nothing to risk, boys—
Don't be in a hurry to go!

Cottage Music.

When the cottage door is open, and the air is bright and clear,
Then the sound of children's laughter echoes on the listening ear,
And the fall of little footsteps, pattering on the rustic floor,
Gently lures the tired wookman to his peaceful home once more.

Oh, the music of young voices! oh, the tuneful little feet!
How they rise and fall together, keeping time in cadence sweet;
Like the ever-moving planets that make harmony above,
So the happy notes of childhood vibrate on the chords of love.

On the settee sits the grandsire, with his eyes so old and dim,
That the little sunny faces seem like fading dreams to him;
But he hears their merry voices, and it almost makes him young,
As he tries to catch the meaning of each little prattling tongue.

Oh, the merry laughing voices, how melodiously they flow,
Bringing to the old man's memory happy days of long ago,
When he, too, could shout with gladness, when he, too, was bright and bold,
Long before his children's children told him how the world grew old.

And the music of young voices, long as this fair earth shall last,
Will re-link the joyous present with the half-forgotten past;
And the ring of little footsteps, pattering on the cottage floor,
Will be heard the wide world over, till there shall be time no more.

—[Christian Weekly.

The World is What We Make It.

I've seen some people in this life
Who always are repining,
Who never, never yet could see
The storm-cloud's silver lining.
There always something is amiss,
From sunrise to its setting;
That God's hand made their map of life,
They seem the while forgetting.

And I have seen a blessed sight
To sin-beclouded vision,
Some people who, where'er they be,
Make earth seem an Elysium.
They always see the brightest side—
The direful shadows never—
And keep the flowers of hope in bloom
Within their hearts forever.

The one can make the sunniest day
Seem wondrous sad and dreary;
The other smiles the clouds away
And makes a dark day cheery.
This life of ours is, after all,
About as we shall make it.
If we can banish grief and care,
Let's haste to undertake it.

Life's Lessons.

BY SOPHIA ANDREWS.

The laughing hours of childhood
Too quickly pass away,
Like some bright dream departing,
Which leaves no cheering ray.

No cheering ray within our hearts,
Now filled with anxious cares;
We grieve for life's realities
Come on us unawares.

The young heart, unacquainted
With the dangers of the world,
Goes forth to meet its terrors,
With Hope's fair flag unfurled.

The path which leads to evil
Is tempting, bright and fair;
We do not see the serpent
Who coils in ambush there.

Then bitter disappointment,
With all its withering train,
Has crushed the spirit's brightness—
Twill never be the same.

Then laughing eyes forget to smile
And blooming cheeks grow pale;
Our cherished hopes are all o'erthrown
And fall their own sad tale.

And thus it is with those who live
In this dark world of cares;
Too oft they grasp the cypress wreath
Concealed amid the flowers.

Then let us in life's morning,
When life itself is new;
Be ever watchful, waiting,
With one bright end in view.

Centennial.

BY WM. ROSS WALLACE.

Hurrah! Hurrah!
We love the Law
That gives alone true station;
Since he began,
'Tis work makes man
Companion in creation;
And, O can he
More noble be
Than out 'mid Nature's forces
While God's eyes see
His harmony,
With Seedtime's, Harvest's, courses?

Brothers, hurrah
For love of Law,
And if 't could have more growing,
O, sure it shall—
CENTENNIAL
Is almost on us glowing!
A hundred years
Of Mind's, Arm's, spheres
For millions have been rolling;
Joy! Freedom's Bell,
Exulting swell!
All earth hears thy grand tolling.
Then let us make
With Plow, Hoe, Rake,
This year yield CROWN ovation
Upon our sod
Unto the God
Of Freedom's and Work's Nation.

"Hayseed."

Timothy and millet seed,
Redtop and clover,
Scatter them broadcast,
Sow 'em all over.
Powdered with hayseed,
Brown locks and fair,
Cute little barley straws,
Sticking everywhere,
Hurrah for hayseed!
How it makes them stare.

Timothy and millet seed,
Redtop and clover,
Songs of running brooks,
Lays of the plover,
Odors of hay mows,
Gold of the corn.
Hayseed will rule the world,
Sure as you are born;
Ring the bell for hayseed.
Toot the mellow horn!

Timothy and millet seed,
Redtop and clover,
Grangers everywhere
All the country over;
Hark! to the wild goose
Heralding the spring.
All his song is "Hayseed!"
Hear the arches ring.
Amen, to Hayseed;
Hayseed is king!!

—[Mrs. M. C. Clarke.

Several fruit-dealers in Portland, Me., are sending apples to Europe, receiving twelve dollars a barrel.

Honor to Our Workmen.

Whom shall we call our heroes?
To whom our praises sing?
The pampered child of fortune,
The titled lord or king?
They live by others' labor—
Take all and nothing give;
The noblest type of manhood
Are those who work to live.
Then honor to our workmen,
Our hardy sons of toil—
The heroes of the workshop,
And monarchs of the soil.

Who spans the earth with iron,
And rears the palace dome?
Who creates for the rich man
The comforts of a home?
It is the patient toiler!
All honor to him then;
The true wealth of the nation
Is in her working men.

For many barren ages
Earth hid her treasure deep,
And all her giant forces
Seemed bound as in a sleep;
Then Labor's "anvil chorus"
Broke on the startled air,
And lo! the earth in rapture
Laid all her riches bare.

'Tis toil that over nature
Gives man his proud control,
And purifies and hallows
The temples of his soul.
It scatters foul diseases,
With all the ghastly trains;
Put iron in the muscle,
And crystal in the brain.

The Grand, Almighty Builder,
Who fashioned out the earth,
Hath stamped His seal of honor
On Labor from her birth.
In every angel flower
That blossoms from the sod,
Behold the Master touches—
The handiwork of God!
Then honor to our workmen,
The hardy sons of toil—
The heroes of the workshops
And monarchs of the soil!

Good Farmer James.

If you had known good Farmer James,
Whose life in ways of labor ran,
You would have known of sterling worth—
The virtues of an honest man.

He never traveled far away;
A foreign shore he ne'er had seen,
And all his life was humbly passed
Where his forefathers' lives had been.

His fields were ample for his wish,
And yielded crops, with some to spare
For those whose lives were sorrowful
With sickness, poverty, and care;

For 'twas his pleasure to assist
In every way the worthy poor,
And when the suffering came his way
No bolt was found upon the door.

Yet idleness ne'er found a friend
In Farmer James... Sloth was a vice,
And carelessness and levity
Were wrong and sinful in his eyes.

His was the ever-constant aim
To help his fellows all he could,
And ne'er was he so happy as
When to his neighbors doing good.

His life was simple from the first,
And when it ripened to its close,
And he was laid away, for him
No word but that of praise arose;

For he had left a legacy
Richer than gold and jewels prove—
A legacy of honest worth,
Of noble actions, and of love.

The Joy of Doing Good.

If thou wouldst know the purest joy
That e'er suffused the soul of man,
Or deep within his bosom burned—
Pure, heaven-born joy without alloy—
Go forth where only God can scan
The act; go where His love is spurned,
And where His peace is never known,
And take a fallen brother's hand
In thine, and lead him to the light.
Do this because thy love has grown
More like the Master's, truly grand,
And He whose omnipresent sight
Reaches beyond all mortal ken,
Down to the depths of every heart,
Will see the hidden motives there.
If for His sake ye do it, then
A joy which seems of heaven a part
Shall give thee peace beyond compare.

It is better to be flush in the pocket than in the face.

A MILPITAS FARM.

Who has not heard of Milpitas? We take it for granted that everybody knows all about the place. We took a stroll over that way lately and visited the fine-stock farm of Chas. Clark. Mr. Clark is breeding Short-horn cattle, Berkshire swine, and also has some fine farm horses. A young stud, sired by Ben Franklin, and out of a fine bay mare belonging to Mr. Clark, the pedigree of which we do not remember, is a likely looking animal, will weigh about 1,400 pounds, and is just the sort of stock a farmer needs—not too heavy to be active, and with strength to work as well as a gait to travel on the road. His color is a dappled brown chestnut. The price of service, $20.

Mr. C. has not a poor or ordinary looking cow on his place, while he has some very fine ones. He finds it more profitable to raise good stock, in fact, the best he can get; and to that point he went East last year and, in company with Mr. Emerson, of Mountain View, brought out several head of Short-horns of the Duchess strain of blood. His two-year-old bull, Duke of Manchester, is certainly a beauty, as well as of a first-class pedigree. We give here the pedigree of this bull that all can see for themselves the strain of blood. The price for service of common or graded cows is $10, and for pure-bred Short-horn cows, $20.

DUKE OF MANCHESTER: Red; calved 3d February, 1873; got by Sheriff (29964), [Sheriff is now owned by S. B. Emerson, Mountain View.]
Dam Duchess of York 3d by Morrton Duke, 5225,
— Duchess of York by 11th Duke of Oxford, 1506,
— Eugenie by Grand Turk (12966),
— Duchess of Norfolk by Duke of Norfolk (5952),
— Duchess by 4th Duke of Northumberland (3649),
— Duchess by Red Highflyer (2488),
— Duchess by Sir Charles (5446),
— ——— by Harry Lorrequer (3985),
— ——— by Blacher (84),
— ——— by Magnum Bonum (4322),
— ——— by Styford (103),
— ——— by Son of T. Wetherall's Bull (690).

We will also append pedigrees of his two fine imported cows. It will be noticed that they are nearly related to the bull. The pedigrees run into the same blood as the bull back to where the list of dams ends. Mr. Clark thinks his stock will bear close breeding. He says this is the way to keep families pure, and that the high prices obtained for Duchess cattle never would have been realized had they not been carefully in-bred.

DUCHESS OF YORK 13TH: Red; calved 21st February, 1873; got by Sheriff (29964),
Dam Duchess of York 9th by Knight of Canada [738], 6243,
— Duchess of York 5th by 12th Duke of Northumberland 4744,
— Duchess of York 2d by Stone's Grand Duke of Oxford 4402,
— Duchess of York by 11th Duke of Oxford 1506.

DUCHESS OF YORK 15TH: Roan; calved 5th of May, 1873; got by Sheriff (29964),
Dam Duchess of York 5th by 12th Duke of Northumberland, 4744.

Mr. C. has some or the Col. Younger "thoroughbreds," but always enters them as "grades" at the fairs. They are fine-looking cattle, but not up to the perfection of points which fine-stock breeders demand.

For some years Mr. C. has been breeding Berkshire swine. He has now some good looking sows and pigs, but gives little attention to them, as he says it does not pay to breed fine pigs for sale. Last fall he returned from exhibitions at fairs and at once altered some fine boars, as there appeared to be no demand for such stock at paying prices. But, he says, in a few weeks he had more orders for hogs than he could fill. So much for getting discouraged at a legitimate business.

MR. CLARK'S FARM

is worthy of some notice, as it is a representative of the better class of farms in that section. He has some over a hundred acres. The soil is black, rich adobe. Such soil can be plowed when soaking wet, and when dry will slack and crumble fine in the furrow. There is a good deal of land of this character around the bay. This farm is fenced into several fields, the largest of which contains thirty-three acres. Near the house he has a strawberry patch and family orchard of about five acres. From this, irrigated by an artesian well and horse-power, he receives considerable profit each year, besides family supplies. Too many farmers neglect this portion of home farming. Mr. Clark's

SYSTEM OF FARMING,

as to routine, is somewhat similar to that of Mr. Emerson, which we narrated last winter. He sows a field to grain two years, then cuts two crops of volunteer hay, pastures one or two years, then crops to grain again. Meantime the same fields are used for pasture every season several months, or from the time the hay or grain is taken off until the next crop is put in. Land left to volunteer is not even harrowed. He can plow either deep or shallow and get good crops. He uses all the manure, applying to the surface. He finds that it takes at least two years of constant pasturage to clean foul lands suitable for a crop of grain. He goes over his pastures with a scythe to cut down each year such weeds as the cattle do not destroy to prevent them from scattering seeds.

One of the finest crops of

HAY,

and some of the best that we have seen, is now stacked on Mr. Clark's farm. From less than thirty acres there are one hundred tons of fine hay, cut in season and stacked before the late rain. Mr. C. gave us his manner of curing hay. He cuts before over ripe, and lets it lie in swarth in one or two days' sun, preferably one, then he cocks it up and lets stand ten or twelve days to cure, then puts into stacks thirty feet wide, and in about ten days it commences to "sweat," and at the end of eighteen or twenty days, or longer, it is ready to bale. We examined the hay in stack, and found it a nice green color, and must approve of his system of curing for this climate.

His cow-hay was cut quite green. Mr. C. says the cows like it better when cut quite green, and that it is better for them. For horses it needs to be a little riper—more solid, and not so loosening to the bowels.

Whenever we find an old California farmer of experience who follows a system successfully, we like to notice it, and also to give such men as prefer fine stock some credit for their enterprise. We have often advised farmers to either purchase fine bulls or to co-operate in purchasing them. And in this connection we add the advice to patronize persons who do own fine stock when within reach of your own. It pays to get good blood into any herd, and the way to do it is only a question of means and economy.

BRIGG'S SAN JOSE ORCHARD.

The name of Briggs will always be connected with extensive pioneer orcharding in California. George G. Briggs was, from 1855 for several years, the principal orchardist in California. Although his several old orchards near Marysville were long ago disposed of to his brothers and others, he is still in the business in several localities. One of the brothers, J. W. Briggs, himself an old Californian and experienced orchardist, has just started a large orchard of 120 acres in our valley, about half way between San Jose and Alviso, on the west bank of the Coyote. We lately visited the place. The soil he has selected is a deep, light loam, easily worked, and watered by three artesian wells that will flow water enough to irrigate the whole easily, and more too. The locality and the soil we believe to be very excellent indeed for the purpose, in fact, as good as there is in our valley, and we must give the gentleman credit for wisdom in making the choice. The land cost him $200 per acre, and under Mr. Brigg's hand it will not be long increasing in value three fold.

We felt interested in finding out the kinds and varieties of fruits that Mr. Briggs thought most profitable to cultivate. The principal portion he has planted with the design of

GROWING FRUIT TO SHIP EAST.

He has set a large pear orchard. The varieties are Bartlett, Buerre Hardy, Buerre Clairgeau, and Winter Nellis. These varieties have been proved the best for profitable shipping East, and are standard varieties everywhere. Mr. B. is too practical an orchardist to cultivate many different varieties. In his large plum and prune orchard, the prunes are made almost a specialty. This part of the orchard is not yet completed. The Gross and Petit prunes De Agen and the Fellenburg are the leading sorts. A thousand cherry trees, mostly Black Tartarians, will about complete the list of trees.

In a portion of the orchard a fine plantation of strawberries is started. These will do as well in the orchard as out until the trees are full grown, and even then they will yield well with proper care. On such light soil, irrigation will not be likely to injure the trees as it would in flat, heavy soil. We noticed that there is quite a fall from the upper to the lower side of the orchard. This will facilitate drainage, and the roots of the trees will run deeply into such soil even when plentifully irrigated on the surface.

While the trees are young, crops of vegetables will be grown. With plenty of water on such soil large crops can be grown as well as not. The trees will not be injured, and the soil can be made pay for cultivation handsomely. We saw in cultivation onions, beets, carrots, squashes, potatoes, etc., between the rows of trees. We remember when Mr. Briggs, at Marysville, cultivated water-melons in his orchard before the trees were large enough to bear much, and many thousand dollars' worth did he sell to the "lousy miners" in early times. Brigg's melon patch was as noted as was his famous peach orchard a few years later. By the way, it was something of an accident, as well as good luck, was

that peach orchard. A large lot of Chili dried peaches arrived in Marysville in an unsalable condition. They had been dried pits and all. Mr. Briggs bought the whole lot "for a song," and planted them. After that, when he found that many of the seeds grew, he sent East for scions and young trees of best varieties, and soon had a fine orchard as the result of forethought and sagacity—for in those days it was looked upon as a desperate experiment and undertaking to try to raise fruit in California. But, after all the experimenting and successes in fruit culture for years in this State, it should be a satisfaction to our people to know that San Jose is yet to bring out the finest orchard that the genius of a Briggs has ever conceived. Success to the crowning point.

HORTICULTURISTS, ATTENTION.

The American Pomological Society will hold its fifteenth biennial session in the city of Chicago, September 8, 9 and 10, 1875. The Society will hold its meeting for discussions.

Under the auspices of the Illinois State Horticultural Society, there will also be held, in the Inter-State Industrial Exposition building, a national exhibition of the fruits and other horticultural products of North America. Seven thousand square feet of space in the south end of the main floor and gallery of the great Exposition building will be assigned to the various States, Territories and Provinces; and in the space assigned to each State, Territory or Province will be arranged the State, county, society or individual collections contributed therefrom, from Nova Scotia to California, and from Key West to Oregon.

Upon the same day, and in the same building, the great Inter-State Exposition of the Arts and Industries will begin its four weeks' exhibition. In immediate proximity is the floral and plant department of the exposition.

The Wilder medal of the American Pomological Society will be awarded for meritorious objects.

It is anticipated that hundreds of thousands of people will visit this grand show of fruits in connection with the great exposition.

As the exposition will continue four weeks, it is desirable that the collections should remain; and the Executive Board of the Illinois State Horticultural Society, who have charge of the fruits, will have a committee in attendance during the entire time to see that all collections are kept in good order—decaying fruits removed and their places filled with similar ones, as far as can be done.

Correspondence relating to the exhibition should be addressed to O. B. Galusha, the secretary of the State Society, at Normal, McLean county, Illinois. Packages of fruits, with the names of contributors, may be addressed as follows: American Pomological Society, care O. B. Galusha, Chicago, Illinois. Shipments should be made in time for arrival by the 6th of September.

We hope each of our horticultural readers will try to represent California by sending specimens of fruits, etc., as they may think most worthy of attention. California should be well represented.

A tea set—the Chinese.

WINTER IRRIGATION, OR FLOODING.

There is not a farmer of extensive experience in California but what will admit that if the large majority of our dry soils were once thoroughly saturated in winter by flooding with water, they would produce good crops of grain with the addition of what rain falls during our driest seasons. There is no question about the practicability of filling the soil with water where it can be obtained without great cost. We know that in many localities water is allowed to run to waste that could be cheaply turned in ditches upon and led over the farms. The same farms would not now sell for one half they would bring if crops were made sure in dry seasons, and with a system of winter irrigation these same farms could be made to yield three times what they now do on an average.

We have written a good deal upon this very subject first and last, but find it necessary to continually harp upon whatever subject is not popular enough to be generally adopted. We are satisfied that were a general system of irrigation once appreciated in California, it would nearly double the productive capacity of our State, and be worth untold millions to our people. Why our farmers do not combine more generally and utilize the valuable water that is now allowed to run to waste, can only be because of a stupidity hardly pardonable. There ought to be a "revival" in farming matters, a grand waking up and taking hold of the right end of things in this State, something better than the lazy method inherited from the slothful ranchers of the early days.

FENCING THE FARM.

We believe in the justice of the no-fence law—that is, in a law that does not compel a farmer to fence his land against another person's stock. But, at the same time, we believe that every good farmer should have his farm well fenced into fields convenient for rotating crops and keeping stock. Aside from the orchard and garden, which should always be fenced against all stock, every field may at some time during the season be used as a pasture. Hay and grain stubble fields make excellent pastures in our drying climate until fall rains, or until they are cleaned by stock.

Herding stock is time wasted; or, at any rate, we would sooner put in our time building fence than racing stock right and left out of a grain field into an adjoining stubble or range. Besides being bad for the stock, it is terribly trying to the patience to do it. Cows in particular are liable to be injured by herding. They should be kept perfectly tranquil and quiet to get the best yield of milk and to be kind of disposition. Many farmers miss it by not having cross fences, so as to utilize their feed when it is most needed.

It looks bad to see a dog preceding his master down street, and calmly turn into the first saloon he approaches. It shows there is something wrong, something lacking, a deplorable tendency on the part of the dog.

The farmer who has established his reputation for having the best marketable products, will always command an extra price for all his crops.

NEWS ABOUT NEWS PAPERS.

Geo. P. Rowell & Co's American Newspaper Directory: containing accurate lists of all the newspapers and periodicals published in the United States and Territories and the Dominion of Canada. New York: Geo. P. Rowell & Co., publishers.

This is a book of nearly a thousand pages, published in the interests, and especially for newspapers and advertisers. We find it a valuable book of reference. From the preface we subjoin the following interesting information:

The seventh (1875) edition of the American Newspaper Directory contains the description of 774 daily, 100 tri-weekly, 121 semi-weekly, 6,287 weekly, 27 bi-weekly, 108 semi-monthly, 850 monthly, 10 bi-monthly, and 71 quarterly publications; a total of 8,348, being an increase 564 over last year, 1,057 over 1873, 1,426 over 1872, and 1,910 over the edition for 1871.

An unusual number of newspapers have been reduced in size, changed proprietorship, or suspended publication during the year just past, indicating that it has not been one of prosperity, notwithstanding the fact that the actual increase in the number printed has exceeded any previous year since the establishment of the Directory.

Circulations have materially decreased. With the exception of two Sunday-school papers, no periodical issued west of New York City sustains a claim to a regular issue of 40,000 copies.

The number of newspapers commencing publication during the year just passed has averaged within a fraction of six each working-day, but owing to suspensions and consolidations the actual increase has been less than one-third of the number established.

California has one less paper than last year.

Number of papers published in this State: Daily, 24; tri-weekly, 2; semi-weekly, or weekly, 82; bi-weekly, 1; monthly, 24; total, 211. The book contains a list of 123 agricultural papers; California has six, and Oregon one.

YOUNG STOCK WITH COWS.

Calves and yearlings that have not been so thoroughly weaned as to forget the cows should never be allowed to run in pasture amongst them. We have lately had a little experience in this matter. Some young stock were turned amongst cows that we are milking, and among them happened to be some yearlings belonging to the cows. Although the cows had young calves, they recognized their own, and by licking and mooing about them got the animals to sucking. As soon as we found it out the young stock were removed, but the cows held up their milk, disliked to be milked, and acted mean in every way. Before the young cattle had access to them they were models of kindness and content. The result is, they persist in bad behavior, and the milk has depreciated in quantity and quality, although they have good feed and treatment.

Worms in Orchards.—We notice that there are some Western orchardists who sprinkle the trees with water poisoned with Paris Green. They say one good sprinkling with Paris Green water cleans the worms out completely. A good garden syringe or a watering pump will throw water over the highest apple tree. They use a tablespoonful of Paris Green to a bucketful of water.—*Ex.*

The average condition of the grain crop is very pertinently expressed by a subscriber at Sunol Glen. What is true in his locality will very generally apply all over the State. He says: "In regard to the grain crop here this most peculiar year, it is spotted. Early-sown grain is good; medium early, about half a crop; while late-sown is almost an entire failure. The June rain-storm did some damage to hay, and crinkled the standing grain. Take it all in all, it has been quite an eventful season. The weather all through has surprised the oldest inhabitant." This is even so. The winter opened early with warm rains that made grass and grain grow promisingly; later came a season of unparalelled severe frosts, with dry winds, that were discouraging; then a very promising supply of rains, followed by a dry spring and absence of May showers. Finally, in June, springs up a regular *south wind rain-storm* of two days' duration—something never before known by the oldest inhabitant of California in summer. Showers would not surprise anybody, but such a storm is a puzzler to the weather-wise. What will follow next we are curious to see. One prophet, who believes that civilization affects the weather, attributes the changes to the rush of Eastern people to California—"they are bringing their weather with them"—smuggling it overland without paying freight, we suppose. The matter should be investigated.

Another Cure for Hoove or Bloat Cattle.

Mr. John B. Warren, of Petaluma, says the *Stockton Leader*, has given information which will be of much importance to stock-raisers. He states that bloat in cattle, caused by eating green clover or from similar causes, may be cured in the following manner: Take hold of the animal by the horns and raise its head as high as possible, then open its mouth, take hold of its tongue with one or both hands and pull it out as far as it will come. As soon as this is done the gas will begin to escape through the valves that will thus be opened at the root of the tongue, and if the mouth is kept open and the tongue pulled forward for a few minutes, the cure will be complete.

Mr. Warren has seen this course pursued in several cases with cattle, also with horses suffering from wind colic, and in every case it proved a complete remedy. When the gas begins to escape it will ooze through the opening like the air from a punctured bladder. This remedy is easily applied, is safer and less painful to the animal than the operations that are sometimes resorted to.

The advantages of San Diego are chiefly for stock raising and bee culture, so large a part of its area is mountainous. In bee culture, few countries in the world, if any, rival San Diego county. Along the base of the mountains in their narrow, winding valleys, you see many bee ranches, some with a hundred or more stands of bees. The honey is made entirely from wild flowers, and mostly from the mountain sage. That made in the early spring is as beautifully white and clear, and as richly flavored as any honey can be. I was relisbly informed that in 1874 the county shipped about 400 tons of honey, and would probably ship at least 600 tons this year. It is becoming the chief agricultural interest of the county, although besides mixed stock, some wheat and barley are also successfully raised.—*W. A. J. Wright.*

How much does a fool generally weigh? A simple ton.

Correspondence.

The Great Question of Our Times.

THE following, written by a lady—a farmer's wife, unused to the pen—as a composition to be read before the San Jose Grange, contains much mature thought upon an abstruse subject that reflects great credit upon the mind of woman.]

The increased restlessness of the working classes throughout the civilized world indicates that in the not distant future some steps will be taken to bridge over the vast chasm which separates the interests and conditions of the producing from the non-producing, wealthy classes. The power of wealth to appropriate to itself a large share of the earnings of the industrious poor, and that this power increases in mathematical proportion to its volume, are admitted facts.

It behooves the friends of humanity to inquire whether the great mass of non-capitalists, by a law of nature like gravitation, must always remain the hewers of wood and drawers of water for the few capitalists. God forbid that I should believe it. Rather would I compare it to a fungus growth on the body of civilization that is corrupting but cannot always exist.

If, then, we are to conclude, as I think we must, that the present oppressed condition of non-capitalists is not God's fault, but ours, it follows that reform is possible; but to accomplish this reform is a herculean task. It will meet with the hostility of the favored class, who control two of the essential sinews of war—money and generalship. It will be clogged by the ignorance and impracticability of the lower strata, and hindered by the Bourbonism of the middling and well-to-do, who are ever ready to take up and reiterate the cry of "communism" to every measure that looks toward social reform.

The recognized theoretic duty of governments, to

STRENOTHEN THE WEAK AND RESTRAIN THE STRONG,

is being reversed in practice; and, instead, every department of the government is made to do duty in the interest of capital, at the expense of the commonwealth, and in violation of the rights and interests of non-capitalists. The government shirks its equal share of the public burden, corrupts public officials and demoralizes society by setting up money, instead of moral worth, as a standard of respectability. But, to enumerate half of the sins of the vast accumulations of capital would be too tedious. I will only say that under our government and laws such a condition of affairs is incompatible with the general good which should be paramount in all governments.

The question above all others which demands our most serious and careful consideration is, how we may place wealth (which we must recollect is made by its possessors only a little less than omnipotent,) under the control of law so that it will be a

SERVITOR OF THE PUBLIC GOOD,

instead of reaping where it hath not sown.

Many good thinkers have reluctantly come to the conclusion that human nature is too weak, and human integrity too frail to resist the temptations which large capitalists are able to offer, and they propose to get rid of the serpent by destroying the egg. To that end they would diminish the facilities for acquiring great fortunes which would cause a more general diffusion of wealth, and more nearly equalize the material comforts and conditions of the people.

The means by which this object may be accomplished are various, but the one which deserves the first consideration is, to so clog with disabilities their ownership of *the earth* (without the use of which human existence would be impossible) as to make it an unprofitable speculative investment for capital.

GRADUATED TAXATION

upon all quantities of real estate above a reasonable limit, offers the means of introducing this reform with little or no violence to private rights; but details will not be expected in this paper. Thus it will be seen that the capital now used in the monopoly and speculation in real estate would seek investment in interest-paying bonds, thus reducing the rate of interest and the facilities of acquiring great fortunes, stimulating manufactories and contributing in various ways to the public good.

But, as before intimated, any proposition to switch off the old narrow track will meet the opposition of money-bags, Bourbon and ignorance, and as reforms are of slow growth, we must, in the meantime, use such tools as are within our reach, so that we may, in a measure, at least, bridge over the gulf that divides productive labor and capital. And in the selection of tools we must not overlook

CO-OPERATION.

The judicious combination of small capitals, under wise and careful management, would accomplish many enterprises of which, otherwise, capitalists would have a monopoly. For this purpose our Grange organization is admirably adapted. We have a bond of sympathy—a common interest. We form social attachments, make acquaintance, and encourage the growth of confidence, which is indispensible in all co-operative enterprises. We can, and will co-operate in the selection of rulers of the state and nation who will understand that there are rights and interests other than those of capital which they are bound to respect, and we will inform ourselves of these rights by the free interchange of opinions in the Grange. In short, the Grange has already borne much good fruit, and is full of promise for an increasing crop in the future, and I should regard as treason to humanity any attempt to check its growth and perpetuity.

SAN JOSE, June, 1875.

Concrete Walls---Two Methods of Building.

EDS. CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL: In your last issue a correspondent calls for information about concrete walls. In the State of Delaware, fine buildings are made with mortar-brick, which is another name for concrete. They take one bushel of stone lime, and after slacking, add ten bushels of coarse, clean sand, with some gravel, then mold it like brick in sizes to suit. If a twelve-inch wall is to be made, 12x18 inches and 8 inches thick is a convenient size. Spread the brick upon a graded yard covered with sand to dry. When dry, they lay the brick in common lime mortar, and plaster it both inside and out, then stripe and pencil to suit their taste. This makes the finest kind of concrete walls, and, if well done, a substantial and durable building.

In Colorado, they have another method.

Some call it concrete, while others give it the dignified name of "grout." They prepare the mortar same as above. Then place two stiff planks upon the foundation for the wall the distance apart they wish the thickness of the wall. The planks have stays across the upper edges to keep them from spreading, and bolts near the lower edges for the same purpose. The planks should be smooth on the inside, and sufficiently stiff to avoid springing. The mortar is placed between the planks and packed in, and if smooth, washed gravel is packed in with the mortar, to form a face to the wall, it is all the better. The mortar soon sets, when the bolts are withdrawn and the planks moved to another place, and the operation repeated until the wall is finished.

I noticed at Fort Collins, Colorado, a large store building made in this way. It was two stories high, and had a very substantial look, although of rough exterior. It was not plastered, nor did they stop the bolt holes with mortar, and many of the gravel stones on the surface were as large as a man's fist.

Frost does not seem to injure it, yet I doubt if it will prove a practical method of fencing in California.

San José, June, 1875. S. Pelton.

Domestic.

Chats With Farmers' Wives and Daughters---No. 7.

by "Jewell."

Perhaps a few experiences in my farm life would be amusing, and show how wide apart *theory* and *practice* come to us new beginners. Shall I own it? I *can't* make good yeast bread! I've tried it faithfully for over two months now, and only succeeded three times in having eatable, light, sweet bread. I may be stupid at it, but I understand thoroughly the routine to go through—the *theory* is all right—but the *practice*,—ah! there is the rub. I doubt not but that I could take a raw hand and tell them just how to make good bread, and they would succeed, too, after trying as I have, two months—perhaps in less time. I may be too old to learn. Who knows the age past which it is impossible for a woman to learn how to make good bread? When I got brewers' yeast I seldom failed—that was in town. But here on the farm, where bakers' bread would taste strangely out of place, it became a duty—nay, a pride, to have plenty of sweet, fresh bread to spread the new butter upon. So at it I went, earnestly, without doubt of success, when, lo! my sponge would not raise. But I was not to be dictated to in that way. I'd make it into loaves. No, it refused to do more than flatten out. However, with a heavy heart and dull head, I was bound to utilize my labor and flour; so I baked it, and fed it in leaden lumps to Jack, our "hound dog," who took it out of my sight.

My husband (who knows *everything*, as all husbands should) encouraged me, and told me to try salt-rising bread. His sister told him exactly how, and a good recipe was in the May number of the Agriculturist, and it was simple, and if I once got into the way of making it, it would be easy enough, etc. So, next day, I cheerfully started in before breakfast; but things did not work well. I could not get the temperature just right. It first baked on the bottom of my pan, and then when I set it off the kettle of hot water it got too cold. At noon I could see no sign of change in the raising. By two o'clock a little foam on the top encouraged me to make it into a sponge. Then I kept it warm (keeping a fire on purpose all day), and tendered it my utmost attention until supper time, when *it* was made into loaves and set to raise. This it gradually did, in a slow, unwilling way, very exasperating to me, so earnest was I. We sat up and baked it that evening—though I felt guilty in doing it, and really thought myself imposed upon by that heavy leaden, sour-smelling mass—the result of all my pains! But my good husband quite petted me this time, and made me feel that a triumph *must* follow when one was determined to succeed in a good undertaking, and that *we learn through our failings*, not successes. So in my heart I resolved to succeed, and in imagination had mastered the art, and baked my last sour bread.

To my next attempt I resolved to give my undivided attention, and as my husband was at home that day, I called in his experienced (?) eye to see the process, and together we watched it all day. By eight that night our united efforts were crowned with success! The two loaves were fragrant and plump, *complete*, the "guide mon" said; but in my heart I knew it was not quite salt enough and resolved to do better next time. But the next, though salt enough, was heavy again, so I felt more than ever how necessary was *light* to our lives.

To recount all my failures would be but a repetition, and my success also. Now I must say right here that this experience has more than ever persuaded me that *our girls should be encouraged and taught to be good cooks*—to make good bread. It is far easier to learn when in mother's house, with few responsibilities, than in our own, when cares and babies are clinging to us and demanding our ceaseless attention.

How to put up currants.

As seasonable advice, I clip from the *Country Gentleman* the following recipes, which are good. I advise the putting up of currants and all tart fruits in glass always, as tin is likely to corrode to the injury of the flavor of the fruit, and danger of the health also:

Currant Ice.—Take one quart currants, one pint of raspberries, one pint of water, and one and a half pounds of sugar; mash the berries; add them to the water; squeeze out the liquor; add the sugar, and freeze. Where raspberries are unattainable, use more currants and flavor with extract of raspberry or strawberry.

Currant Jelly.—If the fruit is gathered before dead ripe, it will make firmer jelly, and it is not necessary to pick it from the stems, only remove all leaves or sticks. Put the fruit in a pail, or pan, over a kettle of boiling water, and heat enough for the skins to break easily, then dip into a bag made of flannel, and squeeze till dry. Measure the juice, allowing for each pint a pound of white sugar, but do not add the sugar to the liquor until it has been allowed to gently boil over the fire for twenty minutes or more, removing any scum that may arise. The sugar is now to be added in the proportions mentioned, when the process of coagulation is so rapid that lumps of jelly are often formed before it is all dissolved; while in color it glows with all the richness and transparency of the garnet. The secret of making all fruit jellies is to boil the juice before, and but little after adding the sugar; if boiled together, the product is apt to be soft, dark and gummy, if it ever becomes jelly at all. Use a pound of sugar to a pound of fruit in preserving currants, and if all the necessary boiling has taken place before the sugar is added, the juice will become a tender, beautiful jelly.

Currant Catsup.—This is a favorite preparation to eat with meats, and is made of five pounds of mashed currants, three pounds of sugar, one pint of vinegar, two tablespoonfuls of finely-ground cinnamon, one of cloves, one of allspice, one of black pepper, one nutmeg and a pinch of salt. Cook half an hour. A great improvement on the above is to add the same proportion of spices to the juice, boil, and finish as jelly. Then the useless seeds and skins are rejected, and more than all, it always retains its first fresh, delicate flavor, which is lost after a time under the regular recipe for catsup.

Preparing Currants for Winter Uses.—To prepare currants for mince pies and other winter uses, add one pound of sugar to four of fruit picked from the stems; cook a few minutes, spread on plates or tins, and dry in the oven, which must not be hot enough to scorch them. When sufficiently dried away, pack in stone jars, and put a layer of sugar over the top. This method is superior to all others for preserving the flavor of fruit (it even adds to the richness of cherries); no fermentation takes place if stored in a cool place, and it will keep unchanged for years. Heating a little sugar and water with several spoonfuls of the fruit makes a dish of preserves in a few minutes.

Currant Vinegar.—To make ten gallons take six quarts of ripe currant juice; put in a jar and let it remain a day or two, removing the scum; add one gallon of molasses, and water enough to make up the ten gallons of liquor; set it in the sun, or a warm place, being careful to exclude insects, and it will soon become good vinegar.

To the above I will add the following:

Raspberry jelly.

There is no more delicious jelly than raspberry; but as the raspberry is a dear fruit and difficult to prepare alone, we find that by taking one-third raspberries and two-thirds currants the jelly has all the flavor of raspberry, does not cost half so much as clear raspberry, and is every bit as good—we think superior to clear raspberry jelly. Make the same as currant jelly.

Another hint: Every year that we put up fruit for the table, we use more sugar than formerly. The fruit keeps finer with plenty of sugar, and is certainly nicer, and suits almost every one's taste better.

Familiar Talks---No. 1.

by "Snip."

"Jewell," "Nell Van," E. E. Anthony and the rest of you who write for the Agriculturist, how I would like to have a cozy, personal chat with you all. As that is out of the question, the next best thing is to become acquainted through the columns of the paper we all prize so highly. Many a useful recipe and hint have I gleaned from it, and will now offer one or two which I think all my sister housekeepers may not have thought of.

A pan-holder.

Instead of the cup-towel or dish-cloth to remove pans of bread, gem pans and the like from the stove, take a coffee or salt sack (a grain sack will do), cut into pieces about ten or twelve inches wide and long enough to al-

low both ends of the bread pan to be taken hold of; bind or hem these, put a strong loop on one corner of each, and keep one hung near the stove. One who has never used them will be surprised to find now much longer towels and dish-cloths will keep clean.

I wonder why so many house-keepers will take "anything that comes along" for

A DISH-CLOTH.

It may be cleanly, but it does not look so, to see a cloth, the original color of which is unknown, used to clean (?) dishes. It will take but a few minutes to cut a flour sack into convenient sizes and hem them. If you will "gather up the fragments" of time, you can soon have plenty of stove-cloths and nice, white dish-cloths.

Following is a recipe that I think is an improvement on the

OLD-TIME FRITTERS

our grandmothers used to make. Don't condemn the article because it is *fried*. Properly cooked it will not soak the grease, which should be pure lard, and boiling hot at the time of cooking and kept so: One pint of Graham flour, milk enough to make a thick batter, one egg, one half teacup of syrup, a little salt, one dessert spoonful of yeast powder. Fry in lard, one teaspoonful for each tablespoonful of batter.

FRUIT IN TIN CANS.—The Boston *Journal of Chemistry* says: The impression prevails among those who use freely fruit which is put up in tin cans, that they are injured thereby, and this impression is in many instances correct. We have long contended that all preserved fruits and vegetables should be stored in glass and that no metal of any kind should be brought in contact with them. All fruits contain more or less vegetable acids, and others that highly corrosive are often formed by fermentation, and the metallic vessels are considerably acted upon. Tin cans are held together with solder, an alloy into which lead enters largely. This metal is easily corroded by vegetable acids, and poisonous salts are formed. Undoubtedly many persons are greatly injured by eating tomatoes, peaches, etc., which have been placed in tin cans, and we advise our friends who contemplate putting up fruit this summer to use only glass jars for the purpose, or what is still better, is to have a family fruit dryer on hand. Fruit is so nicely dried on this machine as to excel all other dried fruit, and if not superior it is equal to any of the canned fruits.

RECIPE FOR CRYSTALIZING GRASSES.—This is the way I do mine, and always have had success: One pound of alum, pulverize and dissolve in a quart of water, but do not let it boil; pour the solution into a deep earthen jar, and let it stand until about blood warm. Fasten your grasses with strings to a stick laid across the top of the jar, set away in a cool place *where they will not be disturbed* for twelve hours, then take them out and let them drain. For blue crystals use indigo or washing blue; for yellow, boil a few saffron leaves in a little water and mix it with the alum water; for pink or red, use Prussian red —the more you use the brighter the color. The solution may be heated over and used until all the alum is gone. Be sure and have your grasses perfectly dry before putting them in the water. Press some green and autumn leaves to put in your bouquets. Some bittersweet berries (if you can get them) will be quite an addition.—*S. A. Lamb.*

THE bright brass work used upon car ornaments and fixtures is the envy and despair of housekeepers who cannot understand why it should not blacken or tarnish as their household utensils of the same metal do when not constantly polished. For their encouragement, we will inform them that after the brass is polished at the factory it is covered with a thin transparent varnish, such as shellac in alcohol; this protects the surface, otherwise it would tarnish as soon as a brass kettle.

HOW TO COOK OATMEAL.—First, be sure to get new, fresh oatmeal, as if it becomes damp or old it is bitter. Put one quart of water into a tin stew pan, salt sufficient to be palatable; stir in carefully so as not to have it lumpy, three or four handfuls of oatmeal. Put it over the fire and stir continually until it has swollen all it will, using care not to let it burn on the bottom. When it has swollen all it will, add more water, and then put the stew pan into a kettle of hot water and leave it cooking for several hours—the longer the better, as the longer it is cooked the softer and more jelly-like it becomes. Having the stew pan in another kettle of hot water prevents its burning on the bottom, and you are relieved from constant stirring. It is good with milk, syrup or sweetened milk, or even with butter alone.

HOW TO MAKE OIL LAMPS SAFE.—A great many accidents are happening every day from the use of kerosene. I will tell you a method by which they can be, to a great extent, prevented, and I hope you will publish it for the benefit of poor people, who are obliged to buy cheap oils. If the body of the lamp is filled with cotton, such as jewelers use to wrap their articles in, after it is stuffed lightly it will receive one-half the quantity of oil which it would if the cotton were not put in. If any accident happens, the oil cannot spill or flow about; but is, as it were, "sopped up" in the cotton, which burns like a fagot, but all in one place.—*Ex.*

GOOD PASTE.—Paste that will keep unchanged in warm weather may be made in the following manner: Put a teaspoonful of fine alum in two quarts of water, and let it boil. Mix a pint of flower smoothly into a pint of cold water, and stir it into the boiling alum water, continuing the boiling and stirring till the flour is cooked, and the whole is clear, like starch. Add to this about half a teaspoonful of essential oil of cloves or cinnamon, or a little carbolic acid, strain through a wire gause or perforated tin strainer, and bottle in wide-mouthed jars, which should be corked to keep out dust.

CRUSTED APPLE PUDDING.—Pare, core and stew slightly, two quarts of tart mellow apples, and place them in a pudding dish; then, to one and a half pints of wheat meal, add one gill of Zante currants and boiling water enough to make a dough, stirring lightly until mixed; roll it out one-third of an inch thick, and spread over the apples. Bake it in a quick oven forty or fifty minutes, take out, reverse on a hot plate, mash the apples with a spoon, and sweeten, if desired; cut it in pieces like a pie, and serve warm, with some fresh sauce.

A FEW years ago a hungry crowd sat down at the well-spread supper table of a steamer, upon which one of the dishes contained a trout of moderate size. A serious looking individual drew this dish toward him, saying, apologetically, "This is a fast day with me." His next neighbor, an Irish gentleman, immediately inserted his fork into the fish, and transferred it to his own plate, remarking, "Sir, do you suppose nobody has a sowl to be saved but yourself?"

A GOOD way to soften putty or paint, is to mix equal parts of good soap, potash and slacked lime, add water to form a paste, apply with a brush, and let it stand three or four hours, and your putty or paint can be easily removed.

By planting several Limburger cheeses about his potato patch a farmer in Linn county, Iowa, drove off all the potato bugs while his neighbors suffered severely from their ravages. This is that kind of cheese which is said to be ripe when a bit as big as a pea will drive a dog out of a tan-yard.

Sheep and Goats.

Angora Goats.

A PROLIFIC subject to write upon, and a prolific animal to breed from is the Angora goat on the Pacific Coast. The time was when it was thought an experiment to breed these animals as a business for profit, but that time is as much passed as is the experiment of cultivating grain, fruit and other productions of the soil in California. The pure bred goats actually improve in our climate, and the common goat, when bread up to a fifteen-sixteenths Angora cross, will generally produce fine No. 1 fleece, Every year the crosses with pure bucks are getting finer, and the success of the enterprise is more apparent. The uses to which the fleece is put are multiplying as our civilization develops in material science and art, and the skins are more demanded, and the flesh is better appreciated. Consequently the demand must always exceed the supply, while a liberal supply must encourage a positive demand. We remember when it was thought that fruit would soon be worthless, so much of it would be produced. But see how the demand has increased as the art of canning, etc., has developed. So with every other useful production, and so in a more striking manner must it be with the Angora goat and its products. The millions of acres of hill lands that are better adapted to the goat than to to any other animal or product, must be also encouraging to the business here. But we might ramble on upon this subject without end. What ia of more direct, practical value to our readers is

FACTS AND FIGURES.

We are in possession of some of these, through the courtesy of C. P. Bailey, of San Jose, who has in Monterey county a flock of fine graded goats, some of which are now high bred. The figures below show the returns of last year's clip, which was sheared after a late rain and somewhat damaged by matting or felting together. No returns have yet been received from this season's clip. We are promised the figures when received. Here is a correct copy of returns for last year's clip:

SALES TWO BALES MOHAIR, ACCT. MOODY & FARISH.

March 31, 1875:

C. P. R. R. 2 Bales Goat Hair—	
375 lbs 1st quality, @ 70c	$262 50
20 lbs 2d quality, @ 48c	9 60
574 lbs shorts, @ 22½c	129 15
14 lbs waste in sorting.	
44 lbs tan,	
1027 lbs	$401 25

CHARGES.

Jan. 12— Freight $18 50, cartage 75c	$19 33
Interest on do	52
Coms., Storage, ins., etc., 5½	22 07 41 92
	$359 33

New York, June 2, 1875.
(Signed) S. THOMPSON, NEPHEW & CO.

MOODY & FARISH, ACCT. OF ABOVE.

Proceeds in currency, $359 33, @ 116¼, in gold	$307 80
Our Coms., 2½	7 70
Net in gold	$300 10

San Francisco, June 11, 1875.

It will be observed by the above figures that only about one-third of this shearing was of first quality. This, from a graded flock, is nothing to be wondered at. As none but pure bucks are used for breeding, in a few years

more the greatest part of the fleeces will be counted as first quality. Mr. Bailey says that the three-fourths and seven-eighths Angora blood with the common goat will make "shorts" fleeces, a few seven-eighths will make second quality, and the fourth cross, fifteen-sixteenths, will nearly all make first and second quality, while the fifth and above crosses will be counted as first quality fleeces.

Mr. Bailey sells a good many high grades every year, and is not breeding so much to sell the fleece as to meet the demand for the goats themselves.

Mr. Gilmore, of El Dorado, sent his last year's clip to Messrs. Hall & Turner, Jamestown, New York, and got a return of 85 cents for first quality fleece. Mr. Bailey has shipped his this year's clip to Jamestown, and expects a much better price than for last season's clip.

The comparative value of sheep and goats' fleece is worth noticing. Mr. B. assures us that there are now, and have been sold in San Francisco this year, some 6,000,000 lbs of sheep wool, at 10 to 16 cents, costs of freight to be deducted. There are now some 7,000 high grades and pure Angora goats on this coast. The fleeces will average 2½ lbs to the head, or 17,500 lbs of mohair, worth at least 80 cents per pound, or about $2 00 per head annually, on an average, at present low prices.

Some parties are talking of shearing the Angora goats twice a year, as is the custom in this State to shear fine-wool sheep. Mr. Bailey thinks it will be better to shear but once a year, but advises feeding the goats when pasture gets short and poor, and then the fleece will be of a uniform strength and texture, and be long, lustrous and much more valuable than shorter fleeces.

At any rate, the Angora goat will hold its own in our climate, and our best breeders declare that it is constantly improving. The probability is that it is capable of being vastly improved; and, taken from the half-civilized country of its nativity and placed upon our pastures and under the careful breeding of enlightened and enterprising Americans, it will not be many years before we can ship specimens of Angoras back to their native country that will "astonish the natives."

Oregon is proving to be a fine climate for these goats, and her pastures, green longer than ours, may give her even an advantage over California. Mr. Bailey sold 300 goats to go to Oregon last fall, and has reports of the most favorable character from them.

The Sheep of Spain. — The following, translated from *Le Journal d' Agriculture pratique*, seems to imply that the Merino is not so much of a favorite on its "native heath" as in other parts of Europe or the United States. If the Merinos described below are a fair type of the fine-wool flocks of the modern Spaniard, says the *National Live Stock Journal*, they but furnish additional evidence of the indolence and decay of that once enterprising people. The standard of the noble flocks from which the importations, during the early years of this century, were made, was certainly far above that here portrayed, though considerably below what has resulted from the energy and skill of American breeders, as now represented in the distinctive family known as "American Merinos":

The breeds of sheep in the north of Spain form three groups, perfectly distinct, and characterized—first, by form; secondly, and principally, by their fleeces. These three types are designated in their native country under the names of Merino, Churra and Lacha.

First —The Merinos, or fine wools. The Merino race, in Navarre, resembles somewhat the type which is usually found in France and other countries of Europe, under the same name. Small in size, rather pot-bellied, and altogether presenting a sorry appearance, the only valuable feature about them is their wool. This is short, frizzled, fine and knotty. This race has, of late years, lost much of its relative value, even in Spain. Raised principally in Estramadura, New Castile and Soria, it forms the major part of the migratory flocks; nevertheless, this race is now less appreciated in the north than in the west of the peninsula. Increasing slowly, yielding only a medium quality of mutton, they are not even profitable for their wool, which, though exceedingly fine, is too little in quantity to make up for the other inferior qualities; consequently this race is very little noticed in the fairs and other agricultural exhibitions; the highest prizes being given to the other races, which are usually much better represented.

Second.—The Churra race, or curly wools. They are much more numerous in Navarre, and infinitely more esteemed than the preceding race. They are much stronger and taller, wide in the shoulders, and closely built in the hind quarters. The wool is of medium length, curly and rather coarse. They are held in high estimation for the fine quality of their mutton.

Third.—The Lacha breed, or long wool. The distinguishing marks of this breed are medium hight, larger in the hind quarters than the preceding race, a fine head, black sometimes, small horns and frequently without any. This race is particularly remarkable for the great length of its wool, which sometimes measures 30, 35, and even 40 centimetres (12, 14 and 16 inches), hanging frequently to the ground, and giving to the animal a very singular aspect, very much resembling the llama. This curious race lives upon the southern slope of the Pyrennes, to the north of Navarre, and principally in the districts of Irun and Valcarlos. It lives constantly out of doors, night as well as day, either in sunshine or shade, remaining, without inconvenience, exposed for weeks at a time to constant rain, which slips off from their thick fleeces without hurting them in the least. They are never fed, except when the snow covers the ground, and then only a little straw and dry leaves, which serves to sustain them till the snow disappears. Some shepherds, during the lambing season only, place their flocks under shelter. Their mutton is reckoned a little less valuable than that of the Churra race, but is nevertheless of good quality. Their fine fleeces are very valuable, and they supply the greater part used in the fabrication of the famous Valentin cloaks. It is remarkable that this race, to which its long wool gives such a characteristic aspect, although living in the same manner as other races, is not subject to so many diseases, and especially those which so often decimate the other Spanish races.

Integrity.—Who ever possessed it that did not derive untold advantage from it? It is better than riches, it is of more value than "diamonds and all precious stones;" and yet every man may possess it. The poorest may have it, and no power on earth can wrest it from them. Young men, prize integrity of character above all earthly gifts.

Dark ages—The ladies,.

Stock Breeder.

Principles Governing the Transmission of Characteristics by the Sexes.

It has been advanced by some breeders that the male transmitted certain characters mainly relating to the exterior of the animal, while the female transmitted characters relating to the interior. And there are many cases which seem to admit of such a theory. The color of the cock is usually transmitted to his offspring; the ram transmits his peculiarities of horns and fleece, and the bull the presence or absence of horns. These facts, for such they seem to be, can, however, be explained equally well in another way.

If we cross a number of varieties, we find that instead of the offspring always showing a blending of the characters of both parents, in many cases the young animal or plant more nearly resembles the one parent than the other; that is, one parent has transmitted more characters than the other, or has transmitted them with more force.

Thus, when crossing the Short-horn bull upon the native cow, the grade offspring is more of a Short-horn in its characteristics than it is a native. We say, in this case, that the Short-horn bull is prepotent, and to this power of transmission we apply the term prepotency. Now, prepotency may belong to either parent, in fact, it may belong to both parents. The sire may be prepotent, so far as certain characters go, but the dam may be prepotent in other characters. Now, this prepotency tends to give uniformity or fixedness to a race or breed. Darwin makes the observation that in certain families the effect of the prepotency of some ancestor is seen in some distinctive character. He says, "It would appear that in certain families some one ancestor, and after him others in the same family, must have had great power in transmitting their likeness through the male line; for we cannot otherwise understand how the same features should be so often transmitted after marriages with various females, as has been the case with the Austrian emperors, and as formerly occurred in certain Roman families with their mental qualities. The famous bull Favorite is believed to have had a prepotent influence upon the Short-horn race. It has always been observed with English racers that certain mares have generally transmitted their own character, whilst others of equally pure blood have allowed the character of the sire to prevail." Now, this prepotency may come into action independently of any supposed influence of long breeding—so that it cannot be referred to habit, as some would have it. Some of Darwin's examples are interesting and instructive. In chapter fourteen of his work on the variation of animals and plants, he says: "The truth of the principle of prepotency comes out more clearly when certain races are crossed. The improved Short-horn, notwithstanding that the breed is comparatively a modern race, are generally acknowledged to possess great power in impressing their likeness on all other breeds, and it is chiefly in consequence of this power that they are so highly valued. Godine has given a curious case of a goat-like breed of sheep from Cape of Good Hope, a ram from which produced offspring hardly to be distinguished from himself when crossed with ewes of twelve other breeds; but two of the half-bred ewes, when put to a Merino ram, produced lambs closely resembling the Merino breed."

Here, in the first place, the goat-like ram was prepotent, but his offspring, when mated with such a strong breed as the Merinos, were not able to transmit their characters. It is also on record that of two races of French

sheep, the ewes of one, when crossed during successive generations with Merino rams, yielded up their characters far sooner than the ewes of the other. In other words, the prepotency of the Merino rams was greater in the one case than in the other; which necessitates this conclusion, that prepotency is the *excess of the power of transmission* which one parent has over the other. It is evident that each parent tends, with a certain force, to transmit its characters, and it will transmit them unless the force is met by one superior to it. It is simply a matching of force against force, the stronger force winning here as elsewhere.

Referring again to the examples given by Darwin. In South America there is a breed of cattle called the Niata breed, with certain marked peculiarities. "When these are crossed with common cattle, though the Niata breed is prepotent whether males or females are used, yet the prepotency is strangest in the female line. In making reciprocal crosses of Pouter and Fantail pigeons, the Pouter seems to be prepotent, through both sexes, over the Fantail." These examples will perhaps be sufficient to show that the transmission of peculiar character is due to some power or force in one or the other of the parents, and not that one parent invariably transmits certain characters and the other certain others.

It appears to be a plan of nature, in both the animal and vegetable kingdoms, that in fertilization, the sexual cells shall come from different organisms. The various arrangements in orchidaceous plants are the most well-known examples of this, but it is now known that in many other orders of plants simpler, but equally effective means are provided for securing cross-fertilization, and it is the opinion of the best vegetable physiologists that this cross-fertilization is the rule, and that cases of continual or habitual self-fertilization are quite rare. In the higher animals, the individuals are divided into two groups—in the one, the male sexual cells are developed, and in the other, the female cells. The result of a fertilization in such a case must always be a sort of cross—each animal possessing its individual peculiarities. In the lower forms, where both kinds of sexual organs are found in the same individual, it might be supposed that no such cross-fertilization existed, but even here it is found that fertilization takes place by the congress of two of these hermaphrodite individuals—each fertilizing the other.—*Prof. C. E. Bessey, Cal. College of Agriculture.*

A STAMPEDE ON THE PLAINS.—There is one thing about cattle very hard to understand, even by those who are most intimately acquainted with their habits, and that is, why they will stampede—suddenly become uncontrollable—lose all their senses, and "like mad" tear away in whatever direction they may get started until completely exhausted. Some writer in the *Journal of Agriculture* thus relates his own experience while crossing the plains to California in 1858:

This drive was the longest and hardest I remember to have seen during the entire trip. The morning of the day we made this drive we broke corral some time before daylight; there was not a drop of water in the entire twenty-five miles; the country traveled over was very hilly, and the day hot and sultry. We went into corral near the North Platte, about one o'clock the next morning.

After corral had been made, the oxen had hardly been unyoked when the entire drove, probably maddened by thirst, took one of those terrific stampedes which used to be so well known on the Plains, and for which it was often so difficult to account. They broke straight for the river, jumped into it and made for the other side. Frank and I were already on our mules, bare-back and with raw-hide halters, and after a word or two we agreed to follow them, he going above, and I below the cattle.

The bottom of the Platte is as changeable and capricious as the fluctuations of stock or the gymnastics of a jack-rabbit. Owing to the quicksand formation of its bed, the bottom is a regular map of hills and holes; one moment the water may not be a foot deep, and the next a horse and rider may be plunging and floundering much beyond their depth. I kept down the stream for a distance and then forced my mule over its bank.

The night was very dark and I could see nothing at all; but the cattle could be heard puffing and splashing in the water. I directed my course down stream, my mule alternately wading and swimming, as long as I could hear any of them below me. I went down this way for nearly a mile and then headed for the north bank; but when I reached it my mule was so worn out and the bank so steep that I could not persuade him to climb it—though my persuader was an excellent one, being a heavy, sharp Mexican spur with a rowler about two inches in diameter. I knew that the mule could attend to himself, so I climbed out and left him to go it on his own account.

Of course I could see nothing of the cattle, and being very effectually played out and in a somewhat reckless mood anyhow, I laid down and went to sleep immediately—strongly under the impression that the cattle at the moment were on their way to the British Possessions, and not a particle troubled as to how soon they got there.

It was nearly sunrise when I woke up, and the sight that met my eyes after a little observation was as soul-cheering a one as ever gladdened the heart of a bull-whacker. Above me was the entire herd of cattle grazing quietly, and not two hundred yards below was my mule. Mounting him I soon found Frank. He, too, had been sleeping, but had managed to keep above the cattle, and he and his mule had kept together throughout. We rode through the herd, and there was not a steer missing. The river had cooled their stampeding ardor, and when they had reached the bank they were willing enough to stop for a rest.

First and last, in my experience upon the plains and in the Rocky Mountains, I have seen a good many stampedes among cattle, but never one that ended so pleasantly and harmlessly. Generally speaking there is but little fun in them. Steers on a stampede seem to be entirely insensible to all arguments of entreaty or coercion. They will run over anything from a prairie dog town to a regiment of U. S. troops. Gen. Harney was proverbial for his management of Indians, but even he could never have stopped a herd of cattle on a stampede. When fairly under headway, I verily believe that if the Flag of our Union (long may it w-a-a-a-ve!) or the Constitution of the United States was placed before them, they would'nt pay any more attention to one, or both, than if they were the National Congress convened in regular session to consider the Louisiana troubles. They will run from fifteen to twenty miles, and even farther, going straight on, through or over everything in their way, until they are at last compelled to stop from utter exhaustion. Under such circumstances they have no more sense than a Piute Indian, or a colored member of a Southern Legislature. Then the work of gathering them up—one has to have gone through it to get a proper appreciation. They scatter in a manner most sad and painful to contemplate, and when being driven back to camp seem to realize a most malicious pleasure in wishing to go in any and every direction save the one intended. Oxen are not the most charming creatures in the world, even when acting their loveliest, but on and after a stampede they are particularly and unreasonably despicable and detestable.

THE COW FOR THE DAIRY.—An exchange says: It is notorious that as we breed so we get. If we breed a multitude of qualities in an animal, that multitude shows more or less of its qualities. If we breed a single quality in an animal representing it we get this. This then is safe, and we know what we have to do. There is a difference, for instance, in Short-horns. Some breed more largely—that is, some strains do—for milk than others. These have been cultivated to that end. We therefore use them, and with success, in the dairy. Here we have beef and the milking property united. This, in the English dairies, prevails to a large extent; also to some extent in this country. If we wish a family cow, one only, we select a large milker from the Jersey breed. We select a large milker because there is never a lack of richness of quality in this breed. It transmits faithfully this one valuable property. In breeding the Jersey, therefore, for improvement, care must be had for the quantity rather than the quality of the milk. If this can be secured—and that it can there is no doubt—the Jersey will be the only cow for the dairy. Beef at the end of the term of milking will be no object then, as the superiority in the milking quality will more than balance the advantage of beef. And so it is now with our best milkers. It is an object to keep for milk alone with these. They may be used for milk alone, and the carcass given away, and still be an advantage over the beef-producing animal.

A Colorado cattle-breeder 9,000 feet above the sea finds it more profitable to raise Short-horns than Texan or other common breeds. They do equally well on the native pasturage without other feed, and bring much more clear money, and are less liable to wander away and scatter before the storms. He condemns the scrub breeds, and claims that the Short-horns are as hardy as any and vastly more profitable.

EVERGREENS AS A WINTER PROTECTION IN THE SOUTH.—It is perhaps not generally known how much protection is afforded to tender vegetation by the presence of hardy evergreens, either as hedges to screen from cold and drying winds, or by their overhanging branches to arrest excessive radiation of heat. It is astonishing, sometimes, to see what apparently trifling protection will save the life of plants which are sure to be killed in more open and exposed places. A few dried bushes or a handful of leaves, a sheltered fence corner or the shade of a large tree, will often suffice to carry tender plants safely through the winter. A few green pine boughs set upright around some Eucalyptus trees in two of my neighbor's gardens have have effectually saved them this winter. The protection afforded by a mass of evergreen foliage seems to be something more than a mere screen, or what would be afforded by an overhanging shed or dried straw. Perhaps the living leaves may modify the temperature in some way we are ignorant of. Certain it is, that many half-hardy plants will survive the severe cold of winter when thus protected, which are almost invariably killed when out in perfectly exposed localities.—*Rural Carolinian.*

The *American Agriculturist* says the rich farmers are those who raise grass and roots, and produce stock or butter and cheese, and make manure enough to raise occasional big crops of grain. The poor farmers are those who depend on corn and wheat alone.

A recent report on "Paper making as conducted in Western Massachusetts," contains a list of 112 different materials for making paper, from all of which an article of fair quality can be produced.

Not an untimely suggestion, that the Fourth of July be postponed one month this year, on "account of the weather."

The Dairy.

John Has a Way.

THE cows are coming, Jessie, dear, make haste and see the sight;
There are twenty milky beauties to be housed and fed to-night.
The first one, with the snow-white horns, is just as old as May;
She and my pet first saw the light the same soft Summer's day.

A tender creature was she, so weak and cold and thin!
John said she was not fit to raise. I said it was a sin
To cast her off for Maybud's sake. John laughed and asked me whether
I thought it best, upon the whole, to raise two calves together.

But she was spared, and so was May. It sometimes seems to me,
In Starbright's soft and gentle eyes, May's pleading glance I see.
I love the creature—you may smile—perhaps my fancies mock;
She's the fairest of the herd, as May's the sweetest of the flock.

There's May, her arms 'round Starbright's neck; the girl is mine to-day,
A frolicsome and genial thing, at study or at play;
The darling of our failing years, the spring in our autumn sky,
A fair white jewel blazing in our faded coronet.

But see, John lets the bars down; in clover deep they stand,
With glossy flanks, and backs as straight as yonder table land;
The fragrance of their breath pours in like ambergris and myrrh;
They're just the neatest cows to milk, John says they never stir.

They know his tone—'tis seldom loud; they know his touch, 'tis kind;
"John has a way," the neighbors say, to make dumb creatures mind;
Perhaps—I only know that I, through all these blessed years,
Have never seen the moment when his voice has brought me tears.

—[Hearth and Home.

Fancy Butter Making.

An Eastern "gilt-edge" butter dairy is thus described in an exchange:

The dairy which is and will remain a specialty on this farm, is a great attraction, and nothing is more noteworthy about it than its thorough order and cleanliness—two essentials which are highly important. Every modern improvement that experience has proved to be of value in the best known dairy regions of the county, is supplied. Water is furnished in unfailing quantities from the reservoirs which contribute to every needed place on the farm, and the most perfect arrangements for cooling in the Summer are provided. The cooling pans used are the deep ones, the old theory that the larger the surface of milk, the greater the quantity of cream to be had, being now generally abandoned by the most accomplished dairymen. These pans are nineteen and a half inches in depth, and eight inches in diameter, being in shape like an ice-cream freezer. I saw the tidy woman who superintends the dairy, skim several of these pans, and took the measurement of cream got from one of them, which was a fair average. There was a depth of eighteen and a quarter inches of milk to begin with; the solid cream removed was of a clear thickness of four and three-quarter inches, or a trifle over twenty-five per cent. of rich cream! None of the butter is worked by hand, but passes through a butter worker, an ingenious and excellent contrivance which has been used for some years in the first dairies in Pennsylvania, and which insures absolute cleanliness while doing its work perfectly. The butter made is eagerly demanded in New York, and brings readily there $1 a pound, this being one result of "fancy farming."

Curing Butter.—S. E. Lewis, of Oxford, N. Y., recently gave an address before the Massachusetts Cheese Makers' Association, which is reported in the Boston *Cultivator*, and the editor says it was "the best and most practical talk on butter making that we have ever heard." Mr. Lewis at the close of his remarks referred to the curing of butter, and said butter, like hay, must have time to cure before making. If butter comes white in Summer, when too warm, you cannot wash out the buttermilk at once, and after washing it will still be white. The proper way under these circumstances is to salt it at the rate of 1½ to 1¾ ounces of salt to the pound of butter, and half work it. Then after 24 hours move it over on the worker, then set it aside for another space of 24 hours, or until the third morning after curing, and you will have fine butter and of good color. He thinks to expose butter to light in order to get color, is an error, and that handling and curing butter is a difficult art. He said very truly that the greatest difficulty in the reform of butter making is that everybody makes good butter. No farmer ever carries poor butter to market, because no farmer's wife ever did admit that she made "poor butter;" yet, notwithstanding these denials, there is an immense amount of poor butter that finds its way into the market.

Sturtevant's Twelve Propositions.—Dr. Sturtevant's lecture before the Connecticut State Board of Agriculture may be summarized as follows:

1—The butter product is largely governed by food.

2—There is a structural limit to the butter capacity of each cow.

3—When the cow is fed to this limit, increased food cannot increase the production.

4—The superior cow has this structural limit at a distance from ordinary food, and is more ready to respond to stimuli than the inferior cow.

5—The superior cow is seldom fed up to her limit, while the inferior cow may be fed beyond her limit.

6—The character of the food has some influence on the character of the butter, but breed has more.

7—There is no constant relation between the butter product and the cheese product.

8—The casein is constant, and does not respond to an increase of food.

9—The casein is constant, without regard to season.

10—Increase in the quantity of milk is followed by an increase in the total amount of casein.

11—Insufficient food checks the production of butter, and tends to decrease the casein and to the substitution of albumen.

12—Feed superior cows nearer the limit of production than inferior cows.

Cows Sucking Themselves.—D. M. Worley says that he has a plan for preventing cows drawing the lacteal fluid from their own udder which is far superior to any heretofore recommended. He describes it as follows:

Get your tin-man to make a half-inch tube of heavy tin, well soldered, leaving both ends open, of the proper length to reach through the cows mouth in the manner of a bridle bit. Punch eight one-eighth inch holes in this tube near the middle, and one inch apart, as follows: two in the upper side, two in the lower, and two in each of the other two sides. Solder a small ring to each end, and it is finished. Fasten a string or strap to one ring, put the bit in the cow's mouth, bring the strap over her head and fasten it to the other ring, and she has done sucking herself. Two years ago a neighbor who had a cow that sucked herself, and kept very poor, procured one of these bits and put it on her. She immediately began to thrive, and they had one more cow to milk. My bit made according to the above description cost just 10 cents.

A correspondent of the *Ohio Farmer* writes to that paper that on the first day of last June he commenced feeding his cow on fresh clover and from that time until the fifteenth of October she had no feed of any kind except what clover was cut from one fourth of an acre of ground. He says further that he raised one hundred and fifty bushels of sugar beets and carrots on one-eighth of an acre, and two tons of hay on the balance of an acre and that the roots and hay will keep the cow from October until next June, so that on one and a fourth acres he has kept his cow a year. The cow, he says, averaged through the Summer eighteen quarts per day. [What California farmer can beat this?]

The recent method for improving skimmed milk by the use of oleomargarine, will be likely to throw a considerable quantity of oleomargarine cheese on the market from the creameries; and while this new process of manufacture opens the way for utilizing the skimmed milk in a better manner by turning out a good-flavored, meaty cheese, we hope the distinctive title of "oleomargarine" may be used in placing it upon the market.

The oleomargarine cheese is said to have remarkable keeping qualities, and that it retains flavor much longer than whole-milk cheese. If this be so, it is another reason why the cheese should have a distinctive name.—*X. A. Willard, in Rural New Yorker.*

Relative Cost of Butter and Beef.—Did it ever occur to any of your readers that it takes more feed to make a pound of beef than a pound of butter? A good cow in milk, well cared for, will make two hundred pounds of butter in a season, worth from $60 to $70; but a dry cow, with the same feed, will not gain as much in weight in the same time, nor will she be worth as much as the butter from the dairy cow, and the milch cow is left. An acquaintance of mine is fattening an ox, and in sixty days he had fed him 900 pounds of meal, at a cost of $15, with only 100 pounds gain in weight—*H. W., in Country Gentleman.*

Ten Good Hints.

The following pithy code of newspaper by-laws is the best we have ever seen:

1—Be brief; this is the age of telegrams and short-hand.

2—Be pointed; don't write all around a subject without hitting it.

3—State facts; don't stop to moralize; it's drowsy business; let the reader do his own dreaming.

4—Eschew prefaces; plunge at once into your subject, like a swimmer in cold water.

5—If you have written a sentence that you think particularly fine, draw your pen through it, a pet child is always the worst in the family.

6—Condense; make sure you really have an idea, and then record it in the shortest possible terms.

7—When your article is complete, strike out nine-tenths of the adjectives; the English is a strong language, but won't bear too much "reducing."

8—Avoid all high-flown language; never use stilts when legs will do as well.

9—Make your sentences short; every period is a milestone, at which the reader may halt and rest himself.

10—Write legible.

None for Him.—"Ish dere some ledder here for me?" inquired a German at the general delivery window of the postoffice.

"No; none here," was the reply.

"Vhell, dot is queer," he continued, getting his head into the window; "my neighbor gets someditmes dree ledders in one day, und I get none. I bays more daxes as he does, und I haf never got one ledder yet. How comes dose dings?"

What is it that a poor man has and a rich man wants? Nothing.

Poultry Yard.

Setting Hens---Breaking Eggs in the Nest.

THE following very full discussion of the above subject we find in the *Prairie Farmer*, and as it contains some useful hints to poultry raisers in this State, we give it a place:

A novice, having trouble with setting hens breaking their eggs, wishes to know what to do about it, but she does not give particulars as to how her setting hens are arranged, or what kind of nests they have; so we can answer only in a general way.

Deep nest boxes are sometimes the cause of hens breaking their eggs. Therefore the boxes should be shallow, so that the hens need not jump down on the eggs when going on their nests. This is particularly needful in case the hens are large and heavy. A very good way with such hens is to hollow out a place for the nest on an earth floor, put one layer of bricks around it, and then fill in with a little clean straw or other suitable material. The largest and most clumsy Asiatic will slide into such a nest with as much ease and grace as can well be imagined, and unless she prove to be what some term a "close setter," there will be no danger of her breaking eggs.

By a "close setter" is meant a hen that bears her weight two firmly on the eggs. Some hens have a way of bearing on, or, as it were, closely hugging their eggs, and in this way some are often broken. Such a hen cannot be used safely as a setter, for even should she nearly complete her three weeks' task without accidents, she will almost surely kill a large proportion of the chicks just as they are about to emerge from the shells by her close setting.

The setting of imperfect or thin-shelled eggs is sometimes the only cause of the troubles mentioned. Such eggs should not, of course, be used for this purpose at all.

Hens fighting over their nests is another cause, and when this is the case arrangements must be made whereby such fighting can be prevented. It will sometimes be found necessary to keep some of the more quarrelsome hens covered on their nests all the time, except for awhile each day when they are let off to feed. We cannot always have choice as to what dispositioned hens we are to employ for hatching, but it is well to know which are preferable, in order that the faulty ones may be avoided whenever possible.

In case at any time an egg is broken, the soiled eggs should be carefully washed in warm water and transferred with the hen to a clean nest, which should, of course, occupy the same place as the other. The wetting of the eggs will not injure them at all, but will be a benefit rather, especially toward the close of the period of incubation. It is even well, a day or two before the chicks are due, to dampen the eggs. This may be done by syrinkling or by placing them for a few seconds in a basin of warm water. We prefer the latter plan. The inside lining of the eggs sometimes becomes so parched and tough as to make it very difficult for the chicks to disengage themselves, even when the shell is partly chipped. The dampening of the eggs will tend to prevent this, and the chicks will come out promptly, lively and strong.

One object in setting hens on the ground is to secure the advantage of moisture; but where it is more convenient to have the nests on board floors, the dampening of the eggs as mentioned may be made to answer every purpose.

HOW TO KEEP HENS FROM EATING THEIR EGGS.—A letter from a small boy, thirteen years old, residing at Mount Morris, New York, was read before the Farmers' Club of the American Institute, lately, asking how hens were to be kept from eating their own eggs. He stated that he had an inclined nest with a hole in one end and a box beneath, and found that to be the best way. Mr. Ely said that the hens should be given certain quantities of powdered oyster or clam shells to eat. They must eat something to make their egg shells, and lime and some hard substance was required. Dr. Smith said that the fowls got enough lime in their ordinary food, and that they did not need to be given pounded shells. Nature provided them with what they wanted. He suggested that Mr. Ely should shut up a hen and keep pounded shell from it, and he would find that the eggs would have a shell. Mr. Ely said that he had tried that very experiment, and found that the hen dropped only soft eggs. Other members of the Club agreed with Mr. Ely that it was necessary to give hens pounded shells. Mrr Wolf said that the hens needed lime to make their egg shells. If they got it in their food, pounded shells were not required; if they did not get enough lime in their food it should be given them in some form. A stranger asked how it was that so many eggs came from parts of the West where there was no shell. Dr. Wells said that the fowls got what lime they needed in the water they drank.

Probably the best way—and a very convenient way, too—to supply hens with lime is to pulverize bones which have been burned and give to them; or, lime itself will be found sufficient.

Pisciculture.

Fish Culture.

THE experience of the past few years has confirmed the opinions of those who have contended that it was not only possible but practicable to raise fish and to restock the streams and rivers which once abounded with food fishes, but which, from various causes, have been depopulated. Not only the native varieties can be brought back, but valuable species from foreign countries or from distant portions of our own country can be introduced and naturalized. The fish crop is destined to become as much a matter of certainty as any product of the land, and one which is capable of indefinite increase.

The *Journal*, referring to this subject, says it has been noticed that the smelt on our sea coast were never so large as during the last season, and the result is attributed to the protection of the laws during the season of spawning and growth. In New York the plentifulness and cheapness of the North River shad this Spring have been often noticed by the newspapers. This seems to be due in a large degree to the action of the State Commissioners of Fisheries, who last year placed five millions of young shad in the Hudson river. It is no wonder that the prices of the grown fish fell to about one-third of the former rates, thus bringing what used to be considered a luxury within the command of all.

This instance must be very gratifying to those who, amid opposition, ridicule and, what is still worse, the blank indifference of the public, have steadily labored to realize the modern theories of fish culture. What has been done with shad can also be accomplished with other kinds of fish, according to circumstances. The New York Commissioners are confident that their introduction of the California salmon into the waters of their State will prove equally successful, even in the Hudson river. During the last year alone they distributed forty-three boxes of salmon trout eggs, three boxes of brook trout, and five boxes of white fish; besides 181,000 salmon, 1,080,300 salmon trout, 527,000 whitefish, 240,000 California salmon, and 2,176 bass and perch. They placed 36,000 young eels in Buffalo Creek, above Niagara Falls, in order to see the result of introducing them into Lake Erie.

When we remember that the State of New York has six hundred and forty-six lakes—some of them entitled to be called seas as to size—to say nothing of its rivers and streams of all kinds, we can see what a field is here opened for adding to the wealth and comfort of the people. And what is true of New York in this respect is equally true of all our States according to their natural resources. The work has been shown to be feasible and easily accomplished, provided only it receives a proper degree of public interest. What is everybody's lookout is nobody's, according to the old saying; so that no matter how much progress is made in developing the best methods of fish culture, and how much pains is taken by commissioners in stocking waters with the young fish, the latter must have the protection of suitable regulations, steadily enforced, or failure will be the inevitable result. Among other legal provisions recommended by the New York Commissioners, is one forbidding any fishing to be done from Saturday night to Monday, which ought to be adopted on moral as well as protective grounds. The whole subject deserves careful attention, and we are glad to observe that it is receiving it to an obviously greater extent every year.—*Prairie Farmer.*

SEA SALMON IN FRESH WATER.—The question as to the ability of the salmon to remain permanently in fresh water has received an important illustration during the past winter. It is well known that the lakes of Maine along the coast contain a variety of fish known as the land-locked salmon, which, while possessing the external appearance and peculiar habits of the salmon, together with equal excellence of flesh, is much smaller, and remains permanently in the lakes; and it is still a vexed question whether this is actually a descendant of the true sea salmon or a different species. An argument in favor of its being the former is afforded by the fact that in two localities young salmon, hatched from the eggs of the true sea salmon collected at Bucksport, have lived in fresh water ponds, and yielded ripe eggs during the past autumn; in the one case at New Hope, Pennsylvania, the fish attaining several pounds in weight, while some bread in Wisconsin were only five to seven inches in length, though perfectly mature in every respect. In the first case, however, the ponds were quite large, and offered ample space for the movements of the fish, while in the other they were confined to small trout ponds of only a few yards in extent. Whether the eggs thus obtained will produce healthy young, and whether these will attain maturity, are questions of much interest.—*Harpe'rs Magazine for June.*

GENERAL SPINNER writes as follows to Mr. Seth Green, the pisciculturist: "The time will come, if it is not already here, when the credit of having demonstrated that an acre of heretofore water waste is worth more for the production of wholesome food for man than an acre of the most fertile land, will be awarded to you."

THE Fish Commissioners of the State of Connecticut report that 1,359,000 young salmon have been introduced into the Connecticut river during the past year, and that a like number will probably be put in during the present month.

THE State Fish Commissioners have received word from the East that a large number of young shad will be sent out this summer to stock the California streams.

At a recent spelling match one man spelt it "parsnip" and got beet.

Apiary.

A Stinging Subject.

My wife is very prond of our garden, and while gushing over it the other morning, a happy thought worked its way under her back hair.

What a delightful thing it would be to have a hive of bees and raise our own honey, as well as everything else.

I have always thought that woman inspired ever since she convinced me that I couldn't do better than to marry her.

This was an original, bold idea; happy thought; glorious idea. I promised her a hive of bees, and went to business with a lighter heart and a firmer belief in the genuineness of home comforts and amusements.

I bought a hive of honey-bees and brought it home with me that very night.

It was one of those patent, hydrostatic, back-action hives, in which the bees have peculiar accommodations and all the modern improvements.

It was a nice little hive, none of your old-fashioned twists or barn-size affairs.

It even had windows in it, so that the bees could look out and see what was going on, and enjoy themselves.

Both myself and Mrs. B. were delighted, and before dark I arranged a stand for the hive in the garden, and opened the bay windows so that the bees could take an early start, and get to business by sunrise next morning.

Mrs. B. called me "Honey" several times during the evening, and such sweet dreams as we had.

We intended to be up early the next morning to see how our little birds took to our flowers, but a good half hour before we probably should have done so, we were awakened by the unearthly yells of a cat.

Mrs. B. leaped from her downy couch, exclaiming:

"What can be the matter with our Billy?"

The howls of anguish convinced us both that something more than ordinary was the matter with him, and so we hurried into our toilettes without waiting to do much buttoning.

We rushed out into the garden, and oh! what a sight met our astonished gaze!

The sight consisted of a yellow cat that appeared to be doing its best to make a pin-wheel of itself.

It was rolling over and over in the grass, bounding up and down, anon darting through the bushes and foliage, standing on its head, and then trying to drive its tail into the ground and all the while keeping up the most confounded howling that was ever heard.

"The cat is mad," said Mrs. B. affrighted.

"Why shouldn't it be? The bees are stinging it," said I, comprehending the trouble.

Mrs. B. flew to the rescue of her cat, and the cat flew at her.

So did the bees.

One of them drove his drill into her nose, another vaccinated her on the chin, while another began to lay out his work near her eye.

Then she howled and began to act almost as bad as the cat.

It was quite an animated scene.

She cried murder, and the neighbors looked out from their back windows and cried out police, and asked where the fire was.

This being a trifle too much, I threw a towel over my head and rushed to her rescue.

In doing so, I ran over and knocked her down, trod upon the cat and made matters no better.

Mrs. B. is no child in a wrestle, and she soon had me under her, and was tenderly stamping down the garden walk with my head, using my ears for handles.

Then I yelled, and some more bees came to her assistance and stung me all over the face.

She was still giving me darby, under the impression that I was the cause of all her pain.

It was love among the roses or something of that nature.

In the meantime, the neighbors were shouting and getting awfully excited over the show, while our servant, supposing us fighting, opened the street door and admitted a policeman, who at once proceeded to go between man and wife.

The bees hadn't got at Mrs. B.'s tongue yet, and she proceeded to show the policeman that I had abused her in the most shameful manner, and that I had bought a hive of bees on purpose to torment her into the grave.

I tried to explain, but just then a bee stung the officer on the nose, and he understood it all in less than a minute.

He got mad; actually lost his temper.

He rubbed his nose and did some official swearing. But as this didn't help matters, he drew his staff and proceeded to demolish the patent bee-hive.

The bees failed to notice his badge of office, and swarmed on him.

They stung him wherever he had no clothing, and some places where he did have it.

Then he howled and commenced acting after the manner of the cat and its mistress. He rolled on the ground for a moment, and then got up and made a straight line for the street, shouting fire.

Then the bees turned to the people who had climbed upon the fence to see the fun. The excitement increased.

Windows went down, and some of the neighbors acted as though they thought a twenty-inch shell was about to explode.

By this time a fire engine had arrived, and a line of hose was taken through the house into the garden.

One of the firemen asked where the fire was, but just then one of those honey mosquitoes bit him behind the ear and he knew directly.

They turned a stream upon the half-ruined bee-hive and began to "play away" with one hand, while they fought the bees with the other. But the water had the desired effect, and those bees were soon among the things that were.

A terrible crowd had gathered in the meantime in front of the house, but a large portion of it followed the flying policeman, who was rubbing his affected parts and making straight for the station house and a surgeon.

This little adventure somehow dampened our enthusiasm regarding the felicity of raising our own honey.

During the next week we wore bread and milk poultices pretty ardently, but not a word was said about honey, and now Mrs. B. has gone to stay a week with her mother, leaving me and the convalescent Tom cat, and the tickled neighbors, to enjoy our own felicity, but not with bees—oh, no!—*Story Teller.*

The Bee as a Scavenger.—A mouse found its way into the hive of one of our amateur bee men not long since, and the intruder was found dead and completely imbedded in wax. The mouse, having a sweet tooth, crept into the hive to steal honey, but unfortunately aroused the inmates, and before he could find his way out again was stung to death. By-and-by decomposition set in, and Mr. Mousey began to disseminate a bad smell, which bees cannot tolerate; but finding it impossible to hustle him over the ramparts, as they do other nuisances, they went energetically to work and sealed him up in wax, hermetically sealed him, in fact, so that not the slightest odor escaped to make the hive unpleasant for the high-toned, extremely neat and cleanly inhabitants.—*Scholastic Republican.*

Handling Bees.—I commenced helping my father handle bees in 1818. I have handled them in the old way most of the time. I have a few gums of my own getting up that I can go to, and in one minute have them open, lift the frames and give them a thorough examination. Long since I found that one should move slow around the hives, and if the bees should surround him, or even come within an inch of his nose, he should be composed. If he should get angry the bees will know it and reciprocate it, and so will they know if you are at ease with them. When you open the hive, if they seem angry or disturbed a few puffs of smoke will entirely subdue them, and you can proceed with your examination.—*J. Frost in American Bee Journal.*

A Plant Destructive to Bees.—The large podded milk weed, almost invariably causes the death of every bee alighting upon it. The bee either adheres to the plant or else bears away a small scale sticking to its feet, and cripples itself fatally in attempting to remove the annoyance.—*Agricultural Report.*

Why Farming is Unprofitable.

The question, "Will farming pay?" has been discussed before the New Hampshire State Fair as follows: It is complained that farming is unprofitable. Men are leaving the farm and seeking employment in manufactures and the trade of the city. New Hampshire, the agricultural part of Massashusetts, of Maine and Vermont, have gone back in population and productive agricultural wealth in the last ten years. Without seeking to touch all the reasons for it, may we not find it largely in this, that we ask too much of the farm? Having a capital of $2,000, $3,000 or $5,000 invested in it, we ask that the farm shall support our families, educate our children, and give us a comparative wealth for old age besides. And yet, do we treat it as other men do their business by which they succeed? If we fail in getting all this from it, we say at once that farming is unprofitable! We are unmindful of the fact that in mercantile business, only one in a hundred is fairly successful, and only one in a thousand eminently so. Does not farming do as well as that, and better? Does only one in a hundred farmers succeed to a competence, and only one in a thousand succeed to affluence? And yet do we not deal with our farms in the same way that we have seen that the nation does with its producers? Do we not take everything off and put comparatively nothing on the land? In every other business of life all the gains a man gets he immediately puts back into his business. The merchant increases his capital year by year, from gains of the preceding year, if he is a prudent man, until it becomes as large as he can profitably manage. But if the farmer makes any surplus on his farm, as a rule, does he return it to his land, either in increased facilities for farming, in enriching the soil, adding to his stock, or draining his land? On the contrary, is he not much more likely to invest in railroad shares or bonds, or some manufacturing enterprise, or loan it to some neighbor? Having taken away from the farm what the farm has brought him, and ought to be returned to it again, to make it more productive, he leaves it impoverished, and then complains that the gains do not increase. Is not the difficulty that he is continually taking away the increase of his capital and leaving it only what it was at the beginning? The merchant, as we have seen, increases his capital year by year; but the farmer too frequently takes his and invests it in other enterprises, and then complains that the farm does not succeed. No farmer we ever heard of ever mortgaged his farm to put manure on it; yet men frequently do mortgage their farms for the purpose of building a fine house; and many take all the earnings of the farm for ten years for that purpose. The mortgage, or the indebtment, once on a farm, as a general rule in the past, except in the change of fortune made by the change of prices arising from the war, remains years, if not to say forever.

The Horse.

Good Things About Mules.

MULES are easier kept than horses, because they eat less and will keep in good condition on poorer food. They are by far less liable to disease. They are more hardy, and will endure degrees of heat and cold that would greatly injure horses. If they sometimes refuse to go, they are rarely known to run away, and, accordingly, they do not break harness, wagons and carts, not to speak of legs and arms. They are not naturally vicious, and most of their bad characteristics may be ascribed to defective education and to bad examples.

The power of endurance of mules is much beyond that of horses. They are also surer footed. They are, accordingly, better adapted as beasts of burden to travel in a warm climate, to endure fatigue, and to make trips over mountains. Mules are almost the only reliance of the inhabitants of Central and South America. They are used for drawing plows, harrows and harvesters, and for taking produce to market, and for all purposes of traveling. In the Southern States they perform nearly as many useful purposes, and there is hardly a cotton, cane or tobacco raiser who would think that he could raise one of these crops without the use of mules.

For plowing between the rows of cultivated crops the mule is in many respects the superior of the horse. His feet are smaller, and, accordingly, do less damage in stepping upon plants. His skin is tougher, and therefore is not so liable to be injured by defective harness. The gait is more uniform and accordingly the driver is not so likely to become wearied. As a rule, mules are less liable to become irritable and fractious on account of the presence or bites of insects, and consequently, do less damage to crops among which they work.

Mules may be put to work much earlier than horses. There is in this respect at least the advantage of one year in the favor of the mule. In other words, the mule will do as much work when three years old as the horse will when four. The mule not only begins to pay his way much earlier but continues to be useful much later in life. We have repeated accounts of mules continuing to do good service after they were forty years old. A mule, the property of the late Prof. Mapes, of New Jersey, was healthy, active and fit for labor when it was sixty years old.

It is urged that the mule is slow and awkward, but these faults are largely the results of bad breeding. As a rule, no care is taken in breeding mules. The dams of most mules are animals that no farmer would want to raise colts from. They are themselves slow and awkward and oftentimes lame and diseased. It is not to be wondered at that these defects reappear in the offspring of these animals. Horses would be slow and awkward if they were raised from animals of this sort, and we can expect nothing different in the case of mules.—*A.*

HORSES vs. MULES.—Much has been said in agricultural papers about the advantage of mules. I have raised some of the best I ever saw, and have had some means of comparing them with the horse. It is very true that the mule will climb a steep hill, if it is free from mud, with a bigger load according to his weight than a horse. It is true that he will rough it through a hard Winter better than a horse, and it may be also that he is less liable to disease than a horse, but he is slow and lacks spirit. In deep mud he is almost worthless.

He seems to have but little power to draw his feet out of sticky soil, and the exertion tires him and he loses heart. In a slough where the spirit of the horse prompts him to a gallant struggle to regain the solid ground, the mule gives up and lies contentedly down in the mud. Of course some mules are worse than others in this respect, but none are equal in mud to the most average horse.

For very hard, heavy work, where there is no mud, the mule will always be valuable, but as long as it remains true that time is money we must prefer the horse to the mule.

The rage for mules commenced in the United States about seventy-five years ago and has been revived at different periods since; but the horse still continues to bear sway, and falsify the oft repeated predictions made many years ago that the mule would eventually supersede the horse in the general work of the farm. For heavy hauling and rough usage on the hard streets of cities I have no doubt but that the mule is the most economical. For this sort of work there is a demand for him, and he may be raised for the market with profit; but it is simple folly for any one now, after seventy-five years of experience with mules in the United States, to talk about their taking the place of horses.—*Cor. Iowa Fine Stock Gazette.*

WINDOWS IN HORSE STABLES.—A German paper states some curious facts relating to the position of windows in horse stables, and their power to affect the eyes of horses of a farmer—fine animals, celebrated for their excellent condition, were kept in a stable lighted only by a small window at one side. When light was needed for work, the door was temporarily left open; the result was that nearly all of these animals had eyes of unequal strength, and in time a number of them became blind on the side toward the window.

Strong light directed in the horses' faces has been found to weaken the sight. The worst position of all for a stable window is in front of the horses and much higher than their heads. An officer had bought a perfectly sound mare from a gentleman whose stable was lighted by windows at the rear of the stalls. The animal was sound and perfectly satisfactory. After three months she became suddenly "ground shy;" on examining her eyes they were found directed upward, and this was explained by the fact that the windows of the officer's stable were situated above the head of the stalls, the eyes being generally drawn in that direction. She was removed to another stall, where the light was admitted from all sides, and in three months' time the difficulty had disappeared.

SOCIAL MORALS IN HORSE-BREEDING.—A horse breeder says: In selecting breeders, great care should be taken relative to the social morals of both horse and mare. Like begets like, and in no case more so than that of the horse. A bad and vicious temper in a horse may be checked, but never eradicated, and he will be unpleasant, dangerous, and his fretting and fuming will unnecessarily waste his strength.

A man bought a horse. It was the first one he ever owned. He saw in a newspaper that side windows in a stable make a horse's eye weak on that side; a window in front hurts his eyes by the glare; a window behind makes him squint-eyed; a window in a diagonal line makes him shy when he travels; a stable without a window makes him blind. He sold his horse.

A horse is never vicious or intractable without cause. Cruelty makes a horse wild. Good men make good horses.—*Ex.*

Following the startling frauds in the whisky business comes the unearthing of gigantic swindling in the importations of silk. In two years, it is currently believed that the Government has been cheated out of at least $1,000,000 at New York alone. How much at other points is unknown. Of course, more or less of the custom house officers are concerned in the matter. In what direction shall we look for the next steal?

Porcine.

The Berkshire Hog.

IT a late state fair in the East, there was not one white hog exhibited. All were black, and either Berkshire of Essex. At the largest of the Western state fairs, that of Illinois, nearly all the hogs were black, or black and white. This would seem to indicate the rapid growth of the black breeds in public favor, and of these the Berkshire takes the lead. As well indirectly as directly, for in the Poland Chinas of the West is seen, in the majority of cases, the Berkshire blood greatly predominating. The Berkshire has been most carefully bred for many years, starting from what was originally a large breed, possessing many good points, and of a black and white and yellowish spotted color. The improvement of the old Berkshire hog was begun in England by Lord Barrington, who died in 1829, and most of the best herds now trace back to this original improved herd. By careful breeding the yellowish color has been gotten rid of, and the white has been confined to the feet, a spot between the eyes, and in some cases a few white hairs near the shoulders, although there are herds in which these last white marks are entirely bred out. The Berkshire, as we now know him, is a moderately large hog, with a smooth, round carcass, broad across the shoulders, with well developed and round hams, a long, deep flitch, very fine, small, bony legs and feet, short face and snout, and covered with a good coat of long, silky, black hair. In many good Berkshires, the bluish or slate colored tint and thin hair of the Neapolitan hog, which has been crossed upon it, is very conspicuous; but it is a question if the black, well-haired animal is not the more vigorous and thrifty sort. One of the chief characteristics of the Berkshire is the evenness with which it breeds. At the exhibitions and in the breeders' yard, whole litters may be seen that scarcely vary from each other, and hardly to be distinguished one from another in appearance, and pen after pen may be examined without any marked variation, excepting in those cases in which, as already noted, the Neapolitan cross is apparent. After fifty years of careful breeding, this is not more than might be expected, and the result appears in an animal which, on the whole, is probably the most profitable to the breeder, the feeder, the butcher and the packer. There is no pig that is more useful to the man who keeps but one, and more to the farmer who feeds a hundred, if the amount of meat in proportion to feed consumed is considered. There is more lean in proportion to fat than in most other, if not in all other breeds, and the bone and offal are very light. The black color is not only skin deep, but the color lies in the outer skin, which is all removed by scalding, and a Berkshire ham is not to be distinguished from that of a white hog, if the hair has not been left on to tell the story. It is no little evidence of its good qualities that the Berkshire has become so rapidly popular, in spite of the prejudice against its color, as to supplant, along with the Essex, all the white breeds, at one of the most prominent Eastern state fairs.—*Home Journal.*

THE following experiment is vouched for by the *Kansas Farmer* as coming from a good and reliable farmer. As showing the relative value of corn and wheat for fattening hogs, it is valuable: He took one hundred hogs and put fifty in pens and fed corn, and fifty and fed wheat, with the following result: Those with corn made eleven pounds per bushel; the fifty with wheat made seventeen pounds of good solid pork per bushel of wheat. The wheat was ground like meal, boiling water poured over it, and then let stand forty-two hours.

We have found that the Berkshire and Essex make an excellent cross for feeding purposes. As a principle, I do not consider it advisable to cross the improved Berkshire with any other on their own account, but prefer rather to keep that breed distinct and up to the mark by occasionally renewing with a foreign blood of its own kind. By foreign blood I mean that of a distant or unrelated family. They are a standard breed, very near perfection in themselves, possessing qualities that cannot be much improved upon without affecting the combination that constitutes the Berkshire and stamp them with a character wholly their own, and which only requires to be kept up to the ideal of their style and perfection to satisfy the requirements of almost every class, condition and locality. The true well-bred Berkshire has the stamp of the thoroughbred, and possesses the merits required for its purpose, and great pains should be taken to perpetuate the purity of that blood. However, when it is necessary or advisable to cross them (for the reason before given) it should be made with the Essex whenever practicable. The result of a single cross will always give satisfaction, the produce being such as will feed quick and mature sooner than the pure-bred Berkshire, and the pork is second to none that goes to market. The general style and appearance of the animals will be similar, except in the markings; some will be more or less spotted, some marked like the Berkshire, some partially marked, and some all black. The cross continued upon itself will soon lose its identity with either breed, and eventually will result in a lot of mongrels.—*Ex.*

Keep Them Fat.—A practical farmer, in communicating his views in the columns of one of our exchanges, says: Keep your hogs fat. The good farmer gives all his young stock a good fat start in life, because he knows it always takes twice or thrice as much to feed a poor horse, cow, or hog, as it does one in good condition. It ought never to be necessary to keep "killing hogs" in the "fattening pen" longer than a week or ten days—just long enough to harden their fat with grain. The hogs ought to be fat to begin with. In fact, the good farmer never has a poor animal of any kind on his place. It pays well to push young pigs from the word "go"—that is, as soon as they are able to crack corn. We knew once a litter of thirteen, half Beskshires, dropped in February, that under this plan, without going into the fattening pen at all, eleven months later averaged 175 pounds net meat—total 2,276 pounds—and the heaviest one was a "runt" at the start.

A New Hog Disease.—A Greenville, Ohio, correspondent of the *Cincinnati Gazette* says: The pigs in our settlement are having a new and strange disease commencing in the head and nose. Symptoms: First, the nose swells, the swelling lasting a few days. Then the nose and head get sore. The sores appear to be of an eating nature. They get larger, and spread over the pig till dead. We have lost over one hundred, and saved perhaps six or eight out of all that took the disease. But even the saved ones are of but little account.

The saying "Excuse haste and a bad pen" has been attributed to a pig who ran away from home.

When a hog roots in a snow bank its nose knows snows.

Gems.—Indifference to the welfare of our country is a crime; but if our country is reduced to a condition in which the bad are preferred to the good, the foolish to the wise, hardly any catastrophe is to be deprecated or opposed that may shake them from their places.

Horticulture.

Heading Off Borers.

Mr. B. Hubbard, writing to the *Rural New Yorker* on the subject of borers in peach trees, says:

I will not waste time to refer to the various expedients to which I have resorted, but hasten to state that at the introduction of Hale's early peach I procured fifteen one-year old budded trees, took extra pains with them, and discovered the next season that the borers had commenced their depredations. I worked at them, knife in hand, for several years, until I had mutilated them very badly. I began to look about for some more effectual remedy. I prepared boxes of inch boards, eleven inches square, ten inches wide; put one around each tree; filled each with damp, leached ashes, pounded down slightly; smoothed the surface nicely, with a damp shovel, quite up to the trunk, and called the work finished. This was the last trouble I experienced with my fifteen trees, and to my mind this is an effectual remedy. The beetle cannot puncture the bark at that distance from the ground, it being dry and hard, and being no ingress or egress, reproduction must cease, of course.

N. B.—This wooden structure will decay after a time. I suggest instead of boards use bricks, which are easily placed about the trees, need no mortar, as the pressure is very slight, and the material indestructible. The expense will be trifling compared with refitting occasionally with wood. I claim not that this remedy is infallible; but this I do know, that for a series of years in my experience it has proved an entire success, and I think from its simplicity no one should be so skeptical as to fail to make the experiment. I speak somewhat positively, but I apprehend my zeal is according to my knowledge.

[If the trunks of the trees are shaded from the sun with boards it will answer the same purposes.—Eds.]

Lime for Apple Trees.—A successful pomologist of New Jersey writes the New York *Herald* that he once noticed that a tree standing in the immediate vicinity of his dwelling had all at once put forth with renewed energy and he was at a loss for some time to define the cause. On examination he found that a quantity of lime, which had accidentally been spilled, and rendered worthless by becoming mixed with the refuse on the stable floor, had been thrown at the foot of and around the tree, and to this, as the principal cause, he immediately accredited the revivement and renewed fructification of the tree. Taking the hint from the incident, he purchased twelve casks of lime, and applied half a bushel to each of the trees in his orchard, and found that it produced immediate beneficial results. Not the health of the tree only but the quality of the fruit also was greatly improved. The *Herald* adds that it has known some farmers to make it a regular practice for a succession of years to throw caustic lime around their apple trees in the spring and summer.

In our own experience on the farm we found that leached ashes worked about the same result as given above. A pear tree close by a leach grew twice as rapidly as one a few rods away.—*Ohio Farmer.*

The Black Pepper.—The two specimens of the black pepper tree planted in the Courthouse yard a year old, with a view of testing its adaptability to this climate, made a rapid growth last summer, but the past winter was unusually heavy, and the frost killed most of the leaves and tips of the twigs. Enough is determined, however, to show that black pepper can be produced here in any desired amount, and that it is capable of becoming an article of export. The tree is an evergreen, and has a strong resemblance to some of the varieties of acacia.—*Tulare Times.*

Value of Evergreens Among Fruit Trees. A well-grown evergreen tree gives off continually an exodium of warmth and moisture that reaches a distance of its area in hight; and when tree planters advocate shelter belts, surrounding a trace of orchard fifty or more acres, when the influence of such belt can only trace a distance of the hight of the trees in said belt, they do that which will prove of little value. To ameliorate climate, to assist in prevention of injury against extreme climate, to assist in prevention of injury against extreme climatic cold in winter and of the frosting of the germ bud of fruit in the spring, all orchards should have planted, in and among them indiscriminately, evergreen trees at distances each of not more than 150 feet apart. Such a course pursued will give health to the tree, and be productive of more regular and uniform crops of fruit. At all events, it is worth the trial, and we shall be glad if our readers can inform us of practical experiments on the subject.—*Scientific American.*

Ripening Fruit.—Acting upon the principal that removal of the earth immediately surrounding the roots increases their activity and accelerates the maturing of all parts of the plant, including the fruit, Mr. Stall removed the earth about an early pear tree eight weeks before the normal period of ripening, for a space of thirteen to fifteen feet in diameter, and to such an extent as to leave a depth of earth over the roots of only about two to four inches, which could be thoroughly warmed by the sun. He was surprised not only by the ripening of the fruit in the middle of July, but also by its superior juiciness and flavor. In another experiment the removal of the earth from the north side of a tree alone caused the fruit on that side to ripen several days earlier than that on the south side. Frequent watering was of course necessary in the above experiments.—*Vineyard Gazette.*

The cranberry is cultivated in Wisconsin and some of the other Western States on a pretty large scale, by simply building dikes for keeping out surplus water from the swamps on the margin of lakes. It is claimed that a capital of only twenty dollars per acre is required for successful cultivation of the cranberry there, while, in New England, it often costs from two to three hundred dollars per acre. Several gentlemen interested in the cultivation of this fruit at the West have lately visited Eastern capitalists and a meeting for discussing the subject has been held in Music Hall, Boston.

Market-Gardening in the Rural Districts.

The census often shows the drift of farm-life more accurately than any partial observation, however minute. It is quite clear, from the returns already examined, that there is a decrease in the amount of live-stock in the New England and Middle States during the past decade, and likewise a decrease in the yield of stable grains, while there will be shown a large increase in the crops of vegetables and in garden products. This shows pretty conclusively that grain-farming and live-stock raising, does not pay so well as some other branches of farming. The city and village population has increased, and the farmers in the immediate vicinity of these large towns are turning their attention more to supplying their daily wants. They can sell potatoes and turnips every day in the year if they have them, and garden products although the summer and fall. There is, however, a brisk demand for poditry, eggs, milk, calves, lambs, and swine, and they very properly raise what the market demands.

How much does a fool generally weigh? A simple ton.

The Flower Garden.

How to Take Care of Bulbs.

AS soon as their beauty of flower is over, we always cut off the flower stems just below the lowest flower, and for this reason: the hyacinth and tulip both seed freely, particularly the latter; if the bulb is forming seed, its strength is in a great measure wasted by that process; whereas if the flower-stem is cut off, the bulb has nothing to do but to prepare itself with vigor for blossoming the ensuing year. We pay great attention to the protection of the leaves of both hyacinths and tulips, and never allow them to be interfered with until nature indicates, by the decay of their points, that the bulb is preparing for rest. We then follow a course with both hyacinths and tulips which we believe many do not; that is, we take them up before the leaves are quite decayed, and for this reason: we believe that both of them, after the bulbs have attained this period of growth, are only weakened by remaining in ground, because the offsets are living upon the parent bulb, and consequently weakening it for the flower of the following year. If a cultivator wishes for stock, he should let his bulbs remain until the leaves are quite decayed. If he wants his bulbs to flower in beauty again, he should follow the practice above mentioned. When taken up, the bulbs should be removed to a shed sheltered from the sun but free to the air, and any earth adhering to the fibres or roots should remain for some little time; after two or three days they should be looked after and the loose earth shaken from them; and, as the leaves decay, they should be occasionally removed. We have generally placed our bulbs at first on the ground, in the tool-shed, and as they got dry removed them to an airy shelf. When the leaves are nearly decayed, we place them in very shallow baskets, and allow as much air as practicable to be between each root to harden them, turning them every two or three days. By this treatment, and rubbing off any portion of mold attached to the bottom and sides, they are in a fit state to be placed for the summer in a dry room; and by a little occasional attention, the rough and outside coat will, by a gentle side-pressure of the thumb, be effectually removed, and exhibits the appearance of the bulb clean, smooth, and in good condition. This latter operation is best performed in the end of August, and at the end of that time remove the remains of such parts of the root of the former year as may have dropped off previous to this time. It is hardly necessary to state that any bulb in an unsound state, either from appearance of decay or from having been injured in taking up, should not be put with those intended for future planting.—*The Garden.*

TUBEROSE BULBS—HOW TO PRESERVE THEM. There are a few rules that the novice in these matters must bear in mind. Do not undertake to dry the bulb with all the top on; do not cut it off too near the crown of the bulb. Either proves injurious. The first, because there is such a mass of green, succulent growth to wither up, and consequently to engender decay; and the latter because there will be great danger of destroying the germ in the center. I have seen bulbs to all outward appearances sound and healthy, but when I examined this vital point I found it gone beyond recovery, and the bulb was necessarily worthless. My practice is to dig them as soon as the first frost injures the leaves, cut them down to say three inches of the bulb, and then spread them thinly on a shutter, or, what is better, a slatted frame, and place them in the sun or near the fire heat, until every vestige of moisture has departed. It is really wonderful how much vitality there is in the leaves of this beautiful flower, for not unfrequently one has to wait for several weeks before they are ready to store away. When once thoroughly dried, I simply place them in a box without any packing material whatever, and keep them in a warm and perfectly dry place. The cellar near a furnace will answer, provided there is no dampness in the air. It is a good plan to examine them carefully during the winter to see if there is any moisture present, and if it is detected, take them out at once, and again spread thinly over the top of a furnace or other surface, to remain until dry once more.—*Ex.*

Educational.

What Should Young People Read?

IT is very hard for boys and girls between ten and twenty to believe what older people tell them concerning the selection of reading matter. If a book is interesting, exciting, thrilling, the young folks want to read it. They like to feel their hair stand on end at the hairbreadth escapes of the hero, and their nerves tingle to the ends of their fingers at his exploits, and their faces burn with passionate sympathy in his tribulations—and what harm is there in it? Let us see what harm there may be. You know very well that a child fed on candy and cake and sweetmeats soon loses all healthy appetite for nutritious food, his teeth grow black and crumble away, his stomach becomes deranged, his breath offensive, and the whole physical and mental organization is dwarfed and injured. When he grows older he will crave spices and alcohol to stimulate his abnormal appetite and give pungency to tasteless though healthful food. No man grows up from such childhood to have positions of trust and usefulness in the community where he lives. The men who hold those positions were fed with milk and bread when they were young, and not with trash.

Now, the mind, like the body, grows by what it feeds upon. The girl who fills her brain with silly, sentimental, love sick stories grows up into a silly, sentimental, lackadaisical woman, useless for all the noble and substantial work of life. The boy who feeds on sensational newspapers and exciting novels has no intellectual muscle, no commanding will to make his way in the world. Then, aside from the debilitating effect of such reading, the mind is poisoned by impure associations. These brilliant stories have always murder, or theft, or lying, or knavery as an integral part of their issue, and boys while reading them live in the companionship of men and women, of boys and girls, with whom they would be ashamed to be seen conversing, whom they would never think of inviting to their houses and introducing to their frends, and whose very names they would not mention in polite society as associates and equals. Every book that one reads, no less than every dinner that one eats, becomes part and parcel of the individual, and we can no more read without injury an unwholesome book or periodical than we can eat tainted meat and not suffer thereby. Just as there are everywhere stores full of candy and cake, and liquor, and tobacco, and spices, so there are everywhere books, newspapers and magazines full of the veriest trash, and abounding in everything boys and girls should not read. And just as the healthful stomach, passing all these pernicious baits, will choose sound aliment, so the healthful mind will reject the unwholesome literature current everywhere, and select such as is intrinsically good.

The other day we picked up a popular juvenile weekly, and presently found ourself knee-deep in slang, over our head in vulgar allusion, and in the midst of a low-lived metropolitan crowd, where cock-fights, dog-fights and man-fights were the condiments offered to whet the appetite for reading; and yet we know families where that paper is regularly taken. Do the parents read it? Do they know what company their children are keeping?

But, says the young inquirer, What shall we read, and how shall we know if books are suitable? Read such books as give you valuable information, works that are approved by people of correct judgment. Our leading magazines contain a vast amount of reading, interesting alike to young and old. Do not read what renders distasteful the duties of life, or renders vice attractive, or makes you long for an impossible and romantic career. A correct taste, once formed and carefully consulted, will enable you to select the good and eschew the pernicious.

"Might I give counsel to any young hearer," says Thackery in his lecture on Prior, Gray and Pope, "I would say to him, try to frequent the company of your betters. In books and life that is the most wholesome society; learn to admire rightly, the great pleasure of life is in that. Note what the good men admire; they admire good things; narrow spirits admire basely and worship meanly.—*N. Y. Tribune.*

IT is often said that students of agricultural colleges do not, in after life, pursue agriculture as a profession; but this cannot be applied to the college at Lansing, Michigan. According to President Abbott, at least forty-two per cent. of the living graduates of that institution are engaged in farming or gardening. If all our agricultural colleges can make this kind of a showing, there will be less cause for growling about them than people suppose.—*Prairie Farmer.*

ONE of the most important errors in education is the idle vanity that looks for everything before its time, and will have fruit before flowers, in order to enjoy the surprise of the guests at seeing the table decked with the evidences of Summer when the earth without is covered with ice and snow. Such things are always pleasing to the eye, even when the growth is not natural. A precocious child, however, seldom grows up into a valuable man.—*Jacobs.*

THE line of conduct chosen during the five years from fifteen to twenty, will, in almost every instance, determine the character for life. As a young man is then careful or careless, prudent or improvident, industrious or indolent, truthful or dissimulating, ignorant or intelligent, temperate or dissolute—so will he be in after years; and it needs no prophet to cast his horoscope or calculate his chances in life.

THINKING.—Thinking, not growth, makes perfect manhood. There are some who, though they have done growing, are still only boys. The constitution may be fixed, while the judgment is immature; the limbs may be strong, while the reasoning is feeble. Many who can run, and jump, and bear any fatigue, can not observe, can not examine, can not reason nor judge, contrive nor execute—they do not think.

Accustom yourself, then, to thinking. Set yourself to understand whatever you see or read. To run through a book is not a difficult task, nor is it a very profitable one. To understand a few pages only is far better than to read the whole, where mere reading it is all. If the work does not set you to thinking either you or the author must be very deficient.

It is only by thinking that a man can know himself. Yet all other knowledge without this is splendid ignorance. Not a glance merely, but much close examination will be requisite for the forming of a true opinion of your own powers. Ignorance and self-conceit always tend to make you overrate your personal ability—as a slight degree of knowledge may make a timid mind pass upon himself too humble a judgment. It is only by thinking, and much impartial observation,

Hygienic.

"Beverages."

BEVERAGES, so called, are tempters to the first steps towards drunkenness. At the appropriate seasons, the newspapers abound in receipts for making various kinds of summer drinks, wines, cordials, beers, and cider. There is no easier and more certain way of making a family of drunkards than by having such things always at hand, "in case of sickness," as it is termed. I know a man, my neighbor for many years, who was accustomed to "lay in" a barrel of cider every autumn, and it was placed on the table every day until exhausted; but every day it became more sour, alcoholic; and by the time it was out, the stimulus of it was so decided that a disagreeable want was experienced, and it was determined that next year he would lay in two barrels; at length six barrels were laid in for the winter's supply; meanwhile, my friend and neighbor had become a habitual drinker, on rising, at breakfast, at dinner, in the middle of the afternoon, and from supper until late bed-time; cider is too tame now; his position and means demand and supply the costliest brandies; he is seldom drunk, but always full; there does not live anywhere a more honorable and high-minded man; in all business transactions he has maintained the very highest position for incorruptible integrity, and as a neighbor and friend and good citizen, he has no superior; but take from him the brandy bottle for a day and he would go mad, or die of exhaustion—of an insufferable sinking.

It is an incontrovertible physiological fact, that any artificial stimulus continued for a few days, makes the system feel the want of it, instinctively lean upon it, and look for it; but this is not all: the same amount of stimulation is demanded every day; but to create that amount, a larger and an increasing quantity of the stimulus becomes necessary, or it must be more frequently supplied. No habitual user of spirits, or of tea and coffee, can possibly deny this, after ten years' practice; as proof, see how much oftener they drink or smok or chew than when they first entered on the miserable, useless and degrading career of self-judulgence. The truth is, there is no safety except in absolute retusal even to taste a drop or chew an atom. He who takes one drop may die in the gutter; he who has the high moral courage to refuse that first drop, that first atom, never can!

I know a whole family of beautiful grown-up daughters, not one of whom by any chance ever refuses, at home or at a party or on a picnic, to take a glass of brandy, toddy or any of its likes. The habit was formed by the mother making brandy the panacea for every stomach-ache, for nausea, for faintness, for bodily derangement, for a chill, for an overwork or an over-meal.—*Boston Watchman and Reflector.*

THE LIVER, weighing about four pounds, is the great wheel of life's machine; it regulates the whole mechanism of man; when it "acts," works well, every other wheel, gland, factory, works with it; when it stops, is "torpid," the whole system begins to get out of order; the feet become cold; the head aches; the mouth tastes bad; there are pains at the edges of the ribs; at the shoulder blades; on the tops of the shoulders; the body is chilly; the mind is confused; the spirits despondent; the disposition fretful, peevish and complaining; there is no ambition, no animation, no life; and if these things are allowed to go on, especially if moodiness is cherished and melancholy feelings are indulged in, the end is suicide. This unhappy state of mind and body is the result of what is called "biliousness," that is, the liver, whose office it is to withdraw the bile from the blood, fails to perform that duty, and the blood, having more and more bile in it, becomes more and more impure, thickens more and more, until at length it is almost too thick to flow at all; if this take place in the chest, it is called congestion of the lungs; if in the liver, congestion of the liver; if in the skull, congestion of the brain; if in the whole body, it is congestive fever, which generally means death. Some of these congestions may arise from other states than a disordered liver.

The bile is composed mainly of those waste portions of the human machine, which, having subserved their purpose, are not further needed, but require to be removed from the body; and in the wonderful wisdom and economy of the great Architect of our frame, and of all worlds, the very passing out of this waste is made to answer a purpose fundamentally essential to all human health; for, after having eaten a meal, the bile is conveyed into the intestinal canal, drop by drop, causing an action which results in the regular daily motion of the bowels, without which there can never be good health for forty-eight hours at a time; hence, "constipation" shows that the liver is not working healthfully, and remedies are required which "act upon the liver." There are two safe, unmedicinal modes of acting on the liver, of starting the machinery of life, when it tends to stand still: go to bed, wrap up warm, make hot applications to the feet, drink warm teas abundantly so as to cause profuse perspiration for two or three hours; a better plan is, go to work in the open air and keep at it, to the extent of exciting a gentle perspiration until tired or very hungry, for whatever starts perspiration on the skin starts the wheel of the liver to working, and the person gets well apace.—*Dr. Hall's Journal.*

DYSPEPSIA.—The most universal cause of dyspepsia is eating too often, too fast, and too much. The general rules should be:

1—Eat thrice a day.
2—Not an atom between meals.
3—Nothing after two o'clock but a piece of cold bread and butter and one cup of hot drink.
4—Spend half an hour at least in taking each meal.
5—Cut up all meats and hard food in pea-sized pieces.
6—Never eat enough to cause the slightest uncomfortable sensation afterward.
7—Never work or study hard within half an hour of eating.

The most universal and infallible indication that a person is becoming dyspeptic is some uncomfortable sensation coming on uniformly after each meal, whether that be in the stomach, throat or any where else. The formation of wind in the stomach, indicated by eructation, belchings, or otherwise, demonstrates that dyspepsia is fixing itself in the system. Then there is only one course to pursue, and that is infallible: eat less and less at each meal, until no wind is generated and no other uncomfortable sensation is experienced in any part of the body. No medicine ever cured confirmed dyspepsia; eating plain food regularly and living out of doors industriously, will cure most cases.—*Dr. Hall's Journal.*

TEA AND COFFEE.—The following result of an analysis of adulterated tea, which is given by Dr. Smith in his work on "Foods," is a fair illustration:

"Iron, plumbago, chalk, China clay, sand, Prussian blue, tumeric, indigo, starch, gypsum, catechu, gum, the leaves of the camella, savangua, *Chloranthus officinalis*, elm, oak, willow, poplar, elder, beech, hawthorne, and sloe."

It will be observed that in this sample there was not a single leaf of genuine tea, while there were two or three poisonous substances. Prussian blue contains a large proportion of prussic acid, one of the most deadly poisons known. Green and black tea are both made from the same plant, the only difference being in the mode of preparation. In general, the only difference is that a green tea is colored with Prussian blue. According to reliable authorities, the proportion of the poison used is *one grain* to every ounce of tea! How many thousands may have been the unsuspected victims of this wholesale poisoning. This mode of adulteration is exceedingly common with the Chinese in their preparation of tea for foreign markets. It is well known that they never use green tea themselves, on this account.

During the single month of July, 1872, 183,000,000 pounds of tea passed through the English custom house, of which 10,000,000 pounds were found so badly adulterated as to be entirely unsafe for use.

Here are a few of the diseases resulting from the use of tea, coffee, chocolate and similar beverages: Nervousness, sleeplessness, hypochondriasis, sick headache, insanity, tremens, convulsions, paralysis, insensibility, torpidity and congestion of the liver, vertigo, palpitation of the heart, tawny and torpid skin, consumption and other lung diseases, all sorts of nervous diseases, decay of the teeth, loss of sense of taste, constipation, diarrhea, hemorrhoids, dyspepsia, general muscular and nervous debility, epilepsy, cancer, and defective circulation.

Ask the tobacco-user, whose whole body is saturated with the filthy poison, if his nature makes any remonstrance to his daily use. He will tell you, No. Put the same question to the confirmed inebriate, and although his blood may contain so much alsohol as to be inflammable, he will tell you that it does him no harm. The user of tea will declare that the beverage is absolutely indispensable for the maintenance of his life; and the opium eater will declare that his daily dose of morphia "does him good."

Even the most inveterate user of either tea or coffee can cease its use at once without any fears of shortening his life by doing so, although he may feel as though death would certainly result. All his bad feelings are simply evidences of the injury which the tea and coffee have already done, and not of the necessity for their use, or of any injury resulting from abstaining from them. But when so sudden a change is made, the individual should make an exclusive business of it. Lay aside all cares and responsibilities. Do not attempt to pursue your usual avocations, at least, let only a very small proportion of the ordinary amount of work be done. Avoid anything taxing or unpleasant. Secure rest and quiet. If the head aches severely, and the nerves seem to be all unstrung, apply hot cloths to the head for a few minutes, take a tepid bath, and go to bed. A few days of persevering effort will end the struggle and give you the victory.

A less satisfactory plan is to gradually decrease the strength of the beverage and the frequency of its use until it can be relinquished without notice.—*Health Reformer.*

The deepest well in the world is in the village of Speremburg, twenty miles from Berlin, Prussia. It was bored by the German Government for a supply of rock-salt. Operations were commenced five years ago by sinking a shaft sixteen feet in diameter, and salt was reached at the depth of 287 feet. In order to find how thick the salt was, boring was commenced at a diameter of thirteen inches, to a depth of 960 feet farther, always boring into rock salt. Encouraged by this, a steam engine was erected, and the boring continued by its help until the present time, when a total depth of 4,194 feet has been attained, without having gone through the salt deposit, which is here at least 3,907 feet thick, while it it not known how much thicker it may yet be found to be.

The end of everything—The letter *g*.

that a man can discover his real disposition. A hasty temper only supposes itself properly alive; an indolent indulger imagines he is as active as any one; but by close and severe examination each may discover something nearer the truth.

Thinking is, indeed, the very germ of self-cultivation—the source from which all vital influence springs. Thinking will do much for an active mind, even in the absence of books, or living instructors. The reasoning faculty grows firm, expands, discerns its own power, acts with increasing facility, precision and extent, under all its privations. Where there is no privation, but every help from former thinkers, how much may we not expect from it! Thus great characters rise. While he who thinks little, though much he sees, can hardly call anything he has his own. He trades with borrowed capital, and is on the high road to literary, or rather to mental, bankruptcy.

How to Eat an Orange.

A correspondent of the *Home Journal* writes: Always on a Southern gentleman's table the dessert of oranges is furnished with small silver fruit-knives and spoons. The orange is held in a napkin—just as you hold an egg—and with the slender point of the knife a circular incision is carefully made made in the stem end of the orange, and the stem core is nicely cut out, leaving an orifice large enough for an egg-spoon. The orange is held and eaten then, just as gourmands eat an egg, in its own shell; and the skill and grace with which this is done—that is, without soiling the fingers or napkin—are, as in the same process with the egg, a test of good breeding. I have known the most inexpert person to master the few difficulties in the way after two or three efforts; and their satisfaction was an infinitely pleasant sight.

To the hostess who likes to have the table preserve in some degree, at the close of an entertainment, the beauty which dazzled the guests upon entering, this method is most desirable. Servants—let me put in a plea for those silent ones whose interests are two seldom regarded—are spared the tedious duty of gathering up the fragments; and guests who look with dismay at this tempting apple of the Hesperides, can thus enjoy it as they never did before. Only the delicious nectar of the fruit is eaten, with the more delicate pulp, the tough fibre—of which, indeed, there is very little in an orange plucked from the tree under its own skies—being left in the shell. I trust you will try this method, which we of the coast country along our Mississippi river think is the only elegant way to get at the heart of the matter. O, those dainty *dejeuners* of the past, with their fruit and flowers, and wit, and grace, and rippling laughter, in the fairest land that ever the skies bent over, our Beautiful, our Desolate.

What Might be Done.

The following is an extract from a speech of P. T. Barnum at Philadelphia:

I will undertake, and give bonds for the fulfillment of the contract, that if the city of Philadelphia will stop selling liquor and give me as much as was expended here for liquor last year, to run the city next year, I will pay all the city expenses (pause); no person living within her borders shall pay taxes (pause); there shall be no insurance on property (pause); a good dress and suit shall be given to every poor boy, girl, man and woman (pause); all the educational expenses shall be paid (pause); a barrel of flour shall be given to every needy and worthy person (sensation); and I will clear a half million or a million dollars myself by the operation! (cries of "hurrah!") It would be the best business speculation I was ever in. Unfortunately they wouldn't give it to me. As Benjamin Franklin said, "we are paying too dear for our whistle."

Boys and Girls.

Helping Papa and Mamma.

PLANTING the corn and potatoes,
Helping to scatter the seeds,
Feeding the hens and the chickens,
Freeing the garden from weeds,
Driving the cows to the pasture,
Feeding the horse in the stall—
We little children are busy;
Sure, there is work for us all,
Helping papa.

Spreading the hay in the sunshine,
Raking it up when 't is dry,
Picking the apples and peaches
Down in the orchard hard by,
Picking the grapes in the vineyard,
Gathering nuts in the Fall—
We little children are busy:
Yes, there is work for us all,
Helping papa.

Sweeping, and washing the dishes,
Bringing the wood from the shed,
Ironing, sewing, and knitting,
Helping to make up the bed,
Taking good care of the baby,
Watching her lest she should fall—
We little children are busy;
O, there is work for us all,
Helping mamma.

Work makes us cheerful and happy,
Makes us both active and strong;
Play we enjoy all the better
When we have labored so long,
Gladly we help our kind parents,
Quickly we come at their call;
Children should love to be busy;
There is much work for us all,
Helping papa and mamma.

A True Hero.

A boy about nine years old was bathing one day, when, by some mistake, he got into deep water and began to sink. His elder brother saw him, and ran to save him, but lacking strength or skill, he also sank to the bottom of the river. As the two drowning brothers rose to the surface for the last time, they saw a third brother, the youngest of the family, running down the bank for the purpose of trying to save them. Then it was that the nine-year-old acted the part of a hero. Struggling as he was with death, he gathered all his strength, and cried to his brother on the shore, "Don't come in, or father will lose all his boys at once!"

Noble little fellow! Though dying, he forgot himself, and thought only of his father's grief. He was a genuine hero. His brother obeyed his dying command, and was spared to comfort his father when his two dead sons were taken from the river clasped in each others arms.

Mary was the proprietress of a diminutive, incipient sheep, whose outer covering was as devoid of color as congealed vapor, and to all localities to which Mary perambulated, her young Southdown was morally certain to follow. It tagged her to the dispensatory of learning, during a natural section of time, which was contrary to all precedent, and excited the cachinnation of the seminary attendants, when the children perceived the presence of the young quadruped at the establishment of instruction. Consequently, the preceptor expelled him from the interior, but he continued to remain in the immediate vicinity, and tarried in the neighborhood without fretfulness until Mary once more became visible.

"Mother, mother," cried a young rook, returning hurriedly from its first flight, "I'm so frightened! I've seen such a sight!" "What sight, my son?" asked the rook. "Oh! white creatures, screaming and running, straining their necks, and holding their heads ever so high. See, mother, there they go!" "Geese, my son; merely geese," calmly replied the sapient parent bird. "Through life, child, observe, that when you meet any one who makes a great fuss about himself, and tries to lift his head higher than the rest of the world, you may set him down at once to be a goose."

The Pineapple.

The history of the pineapple dates back for three or four centuries. Columbus found it on the Island of Guadalupe in 1492. The Japanese cultivated it as early as 1590, and it is supposed that it was first brought to Europe from Jaua. It appears that this fruit was transplanted from South America to Asia and Africa; for, in 1592, it was carried to Bengal and China from that country. It thrived in Brazil, and, according to Humboldt, grows wild in the forest of Orinoco. They spoil very easily, and sometimes during the voyage here the whole cargo of a vessel is spoiled. It is considered a good trip if three-fourths of a cargo is in good condition when the vessel arrives. This depends not only on the length of the voyage, but also upon the bad weather experienced, thunder showers being particularly destructive to them. It is estimated that four million two hundred thousand pineapples are brought into New York annually. The business of canning this fruit is becoming quite extensive, and likewise profitable, and several firms are engaged in this preparation, and they put up at least a million pineapples in cans every year.

Treatment of Animals and Implements on the Farm.—Is not the following as applicable to California as to the South? If a southern farmer wants a wagon he buys it where best he can—most likely through some dry goods merchant, who secures the sale by exhibiting to the inquiring farmer a beautiful chromo, painted with all the colors of the rainbow. The vehicle is bought at the cost of a hundred dollars or more, possibly on a credit with fifty per cent. profit to the vendor, and finally reaches home as pretty as a picture. Left in the horse-lot on its arrival, there it stands, subject to winter's rains or summer's suns, except when in use, until every vestige of paint has scaled off, nuts and bands become loose, and wheels so rickety that the running gear can scarcely sustain itself, when the owner pronounces the manufacturer a cheat and his wagon "no account." The same vehicle, kept closely housed at all times, day and night, except when in actual use, would last almost a life-time and look fresh until it is worn out.

But to shelter these vehicles would require the building of sheds, and building sheds necessitates spending money, and money is the very thing we farmers do not have. This is the excuse of many farmers who have no shelter for vehicles on their farms, and not very desirable stables or houses for their stock in most cases. But it is an excuse without reason, for there is not a farmer in the South who cannot, by his own labor, free of the expenditure of a dime, build a shed that would shelter his implements from the weather.

The ploughs, that might be secured somewhere under shelter, are seldom brought nearer than a fence corner in the lot and there left until the next time they are needed, if it should not be for six months.—*Rural Carolinian for April.*

The Pacific Jockey Club of San Francisco offer a purse of $30,000 at their November meeting, for a four-mile-and-repeat race—$15,000 to the first horse, $6,000 to the second, $5,000 to the third, and $4,000 to the fourth. It seems that when there is so much money to spend in stimulating the breeding of race horses, our agricultural societies ought to do something to encourage the raising of farm and draft stock. If the sums above mentioned were offered to the men who in five years from this time would exhibst the best home-bred farm horse, we doubt not the result would be beneficial to the State—*Semi-Tropical Farmer.*

"Do you like codfish balls, Mr. Wiggins?" Mr. Wiggins, hesitatingly—"I really don't know; I don't recollect attending one."

SPROUT PRUNING.

We desire to say a word to orchardists, and all others, about suckering fruit trees. It is a common practice for persons in summer to go about amongst their trees and cut or break off the sprouts and suckers that are growing out where limbs are not wanted to grow. Now we expostulate. We say don't do it. It is not the right season to trim foliage from the trees, and it cannot be done without injury to the vitality of the tree. This is particularly the case with trees that have been heavily pruned, or that were grafted last spring or this year before. Such trees are most likely to throw out a good many shoots from the trunk and limbs, and because such shoots are not wanted to make limbs they are ruthlessly cut away. Our reasons, founded on experience and the most careful observation, are these: The tree needs leaves to absorb nutriment from the air and assimulate the same, induce a healthy circulation of the sap, shade the limbs and trunk of the tree, etc., all very important offices to the life, health and value of the tree. Nature puts out these shoots from such parts of the tree as are most likely to produce healthy leaves which can most perfectly perform this office. The *waste* in growing these shoots is very little compared with the *gain* through them to the rich juices that sustain the tree in vigor and growth.

Where you think that these suckers are "sapping," as the saying is, the life from your scions, nip off the outer ends of the suckers only. By checking their rapid growth the sap will naturally flow into such scions or limbs as have not been molested and make them more vigorous; when if you cut away the suckers the sap of the whole tree becomes in a measure stagnated, and an imperfect digestion is sure to follow. "Sour sap," with limbs exposed to the sun, will kill the limbs, and no tree can be deprived of its leaves, or any portion of them, at this season, without suffering proportionately.

Next winter and spring you can cut away whatever growth is out of place or not wanted with comparative impunity. The tree is then at rest, the starch and sugar now being formed and absorbed through the leaves are then held in store in its vital juices. The buds left on the tree next spring will be thrown into action to make new shoots and leaves. Healthy, strong, vigorous roots to a tree are of as much, or more importance than a good top. To keep the roots vigorous, a full top during the growing season is necessary. There is nothing vicious in suckers growing. It shows that a new stock of healthy leaves is needed to keep up an active circulating of the sap—that nature is true to herself, and responds to the call where a balance of power is needed.

Our advice is to the point: You may nip back the suckers that seem to detract from the growth of other limbs or of scions, but don't remove them until after the fall of the leaf. Next winter, during pruning season, cut away all surplus growth not wanted It is never safe to remove large suckers from the tree during the growing season, unless there is a great abundance of limbs and leaves on the tree to give breath, draw nutrition and give vigorous circulation to the vitality of the tree.

PUBLICATIONS.

Hints and Helps in Our Temperance Work.

This is a pamphlet of seventy-two pages, prepared by Miss Frances E. Willard, Corresponding Secretary of the Woman's National Christian Temperance Union, containing full constitutions and plan of work for every department of woman's Christian temperance work, State county and local unions, juvenile societies, etc., full of important hints and suggestions, making a valuable hand-book for all. Send 25 cents for this book, and you will always think it money well invested. Address J. N. Stearns, publishing agent, 58 Reade street, New York.

The Science of Health

For July commences volume seven of this vigorous, active, and most instructive monthly. Its contents are more than usually diversified; opening with an interesting sketch and fine portrait of the late lamented publisher, Mr. S. R. Wells, the interest is well sustained throughout. It is filled with excellent articles on health subjects. The recipes of the department of Household and Agriculture are unusually full. Take it altogether it is a capital specimen number of that sort of literature which the masses of the people need to read. Price 20 cents. By the year, $2. An excellent premium is offered to those who subscribe for the year. Address, S. R. Wells & Co., 737 Broadway, New York city.

The Phrenological Journal,

Published by the above firm, $3 a year, is one of the best publications in America, filled with rational, intellectual food. Mrs. Charlotte Fowler Wells is now conducting the business of her late husband, and these publications must continue to be as entertaining as heretofore.

"Wide Awake."

The first number of a beautiful illustrated children's magazine, *Wide Awake*, is on our table. It is edited by Ella Farman and published by D. Lothrop & Co., Boston, Mass. $2 a year. A glance through it shows us a splendid assortment of rational, original matter, just to suit boys and girls, tinted pages and lots of nice pictures in highest style of the art. Send 20 cents for a specimen number.

"Sunshine,"

Is our favorite magazine for the little ones. No clap-trap, wishy-washy trash in it, but pretty stories, pictures and other interesting matters that are worth reading because they entertain and have some point to them. This little waif is published at Santa Clara by two good-looking school-marms, and is only $1 10 a year, postage paid. Address "Sunshine," Santa Clara.

We are under compliments to A. L. Bancroft & Co., San Francisco, for a pink-covered novel entitled "The Woman of Fire," by Adolphe Belcit, translated from the French. Now, we know nothing about the author, and don't care a fig for the contents, but by a glance through it we see it is a sort of sentimental love story. Of course, it was very considerate of B. & Co. to send us this novel to read during the hot weather, but we wish that when they send us another book to be noticed they would send something worth noticing, worth reading, and something that we can recommend on its own merits to our readers. To grass with all such trash as this. The world is full of it, and none the better for it either.

Meal-Feeding and Animal Digestion,

By L. W. Miller, Stockton, New York is the title of a little book published by request of the American Dairymen's Association. Price, 25 cents. This little work will be found valuable to all dairymen and others who feed grain, ground or whole, to animals. Inclose 25 cents to the author as above.

The Statistician

Is a monthly publication containing all sorts of statistics, such as cannot be found anywhere else. Get a copy at the news-stand, examine it, and then subscribe.

"Do you like codfish balls, Mr. Wiggins?" Mr. Wiggins, hesitatingly—"I really don't know; I don't recollect attending one."

A Standard Temperance Prize Essay.

TO THE FRIENDS OF TEMPERANCE.

The Committee appointed by the National Temperance Convention, held at Saratoga, in 1873, on the subject of a Standard Temperance Work, decided to divide the work into three parts, and to offer Two Prizes for each of the three essays, to be open to all writers who choose to compete therefor, in this and other countries:

1. The Scientific; embracing the Chemical, Physiological, and Medical aspects.

2. The Historical, Statistical, Economical, and Political.

3. The Social, Educational, and Religious.

The fund at command, through the efforts of Job H. Jackson, of West Grove, Chester county, Pa., enabled the Committee to offer one year ago Prizes of $500 and $300 for accepted manuscripts for Part I, and the responses of writers, now under examination, lead the Committee to hope for a work of value commensurate with the great cause it is expected to promote. This encouragement and the fund at command, and personal guarantee of Mr. Jackson, now further enables the Committee to announce Two Prizes for Part II—the Historical, Statistical, Economical and Political, and Two Prizes for Part III, embracing the Social, Educational and Religious relations of Temperance; viz.: For the best essay for each of these parts, adjudged satisfactory, the sum of $500 will be paid; for the second best essay, the sum of $300 will be paid—accepted manuscripts to become the property of the National Temperance Society.

The offers for Part II and Part III will remain open to all competitors one year, till July 1, 1876. Manuscripts (with the names and addresses of the writers by whom they are forwarded for competition, enclosed in separate sealed envelopes, not to be opened till after the award has been made) should be forwarded to A. M. Powell, 58 Reade street, New York.

The essays should be of such a character that, while adapted in style to interest the general reader, they will also meet the demands of scholarly criticism.

Those who intend to compete for the prizes offered for these essays, and who may desire more information as to the scope of the work and suggested subdivisions, will be furnished with further particulars by applying to Mr. Powell, as above.

In order that the complete standard Work may be placed before the public at the earliest practicable day, the Committee urgently appeal to friends of temperance to promptly supply them with funds to meet the prizes announced and to publish the work. The sum of $500, at least, additional to that on hand, will be required. Contributions may be sent to Job H. Jackson, Treasurer, West Grove Chester county, Pa.; to J. N. Stearns, Publishing Agent of the National Temperance Society, 58 Reade street, New York, or to any member of the Committee.

A. M. Powell,
James Black,
R. C. Vitman,
A. A. Miner,
Neal Dow,
} Committee.

58 Reade st., New York, March, 1875.

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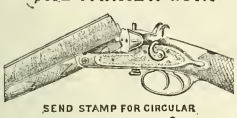

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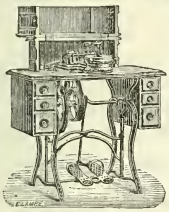

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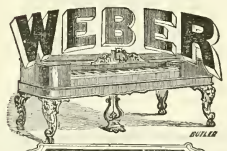

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Mr. Stuyvesant was awarded the HERD PRIZE at the New York State Fair at Rochester, last Fall, with large competition.

THE PEDIGREES
of this stock are all good. Catalogues containing a description of the herd will be sent on application. Also, catalogue of the small but value herd of Shorthorns at Edgewood written out on application.
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SAN JOSE.

Volume 6. CALIFORNIA Number 8.

AUGUST.

AGRICULTURIST AND LIVE STOCK JOURNAL

Subscription Price, $1.50 a year. SAN JOSE, CAL., AUGUST, 1875. Single Copies, 15 cents.

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Singer Manufacturing Co.	1872. 219,758	1873. 232,444	1874. 241,670—Inc.	21,221
Wheeler & Wilson	174,088	119,190	92,827—de.	81,261
Grover & Baker	62,010	36,177 cs.	20,088— "	32,040
Domestic	49,554	40,114	22,760— "	26,854
Weed	42,444	21,709	20,595— "	21,949
Wilcox & Gibbs	33,620	15,881	13,710— "	19,929
Wilcox	22,666	21,247	17,395— "	5,141
American B. H.	18,930	14,182	13,529— "	5,401
Gold Medal	18,897	16,441	15,214— "	3,683
Florence	15,753	8,769	5,747— "	10,276
Howe			cs.35,000	
Victor	11,901	7,446	6,292— "	5,609
Davis	11,376	8,851		
Blees	6,953	3,458		
Remington Empire	4,382	9,183	17,608—In.	12,626
Brunsdorf & Co.	4,262	3,081	1,866—de.	2,398
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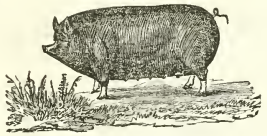

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The Springfield *Republic* has a female compositor who weighs 160 pounds, and yet she bothers the foreman for "fat" every day.

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Parties desiring to purchase Live Stock will find in this Directory the names of some of the most reliable Breeders.

OUR RATES.—Cards of two lines or less will be inserted in this Directory at the rate of 50 cents per month. A line will average about eight words. Payable annually.

CATTLE.

C. B. POLHEMUS, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle,

S. N. PUTNAM, breeder of Pure-bred Durham Cattle, Santa Clara, Cal.

S. B. EMERSON, Mountain View, Santa Clara county, Cal., breeder of Short-Horn and Holstein Cattle and Cotswold Sheep.

CHARLES CLARK, Milpitas, Santa Clara county, Cal., breeder of Short-Horn Cattle and Swine.

CYRUS JONES & CO., San Jose, Santa Clara county, Cal., breeders of Short-Horn Cattle.

COLEMAN YOUNGER, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle.

L. J. HANCHETT, San Jose, Santa Clara county, Cal., breeder of Short-Horn Cattle.

R. G. SNEATH, Menlo Park, San Mateo Co., Cal., choice Jersey Cows, Heifers and Bull Calves for sale

CARR & CHAPMAN, Gabilan, Monterey county, Cal., breeders of Trotting Horses, Short-Horn Cattle and Swine.

R. B. CANNON, Suisun, Solano county, California, breeder of Short-Horn Cattle and Swine.

JOS. L. CHAMBERS, St. Johns, Colusa county, Cal., breeder of Short-Horn Cattle.

C. COMSTOCK, Sacramento, California, breeder of Short-Horn Cattle.

J. BREWSTER, Galt Station, Sacramento county, Cal., breeder of Short-Horn Cattle.

WM. FLEMING, Napa, California, breeder of Short-Horn Cattle,

W. L. OVERRHISER, Stockton, San Joaquin Co., Cal., breeder of Short-Horn Cattle and Swine.

J. R. REDMOND, Black Point, Marin county, Cal., breeder of Short-Horn Cattle.

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J. R. JEWELL, Petaluma, Sonoma county, Cal. breeder of Short-Horn Cattle.

SENECA DANIELS, Lakeville, Sonoma county, Cal., breeder of Devon Cattle.

CHAS. G. HOCKIUS, Lomo Place, Sutter county, Cal., breeder of Short-Horn Cattle.

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SHEEP AND GOATS.

MRS. ROBERT BLACOW, Centerville, near Niles Station, Alameda county, Cal. Pure-blooded French Merino Rams and Ewes for sale.

A. G. STONESIFER, Hill's Ferry, Stanislaus Co., Cal., breeder of Pure-blooded French Merino Sheep.

A. VROMAN, Jenny Lind, Calaveras county, Cal., Cotswold Bucks for sale. References, Moody & Farish, San Francisco; Shippee, McKee & Co., Stockton.

LENDRUM & ROGERS, Watsonville, Cal., Importers and breeders of Pure Angora Goats.

C. P. BAILEY, San Jose Cal., importer, breeder and dealer in Cashmere or Angora Goats. Fine Pure-bred and Grade Goats for sale.

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M. FALLON, Seventh and Oak streets, Oakland, Cal., offers for sale Eggs from every variety of choice Fowls.

ALBERT E. BURBANK, 43 and 44 California Market, San Francisco, importer and breeder of Fancy Fowls, Pigeons, Rabbits, etc.

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LEDDY & BRO., Stall No. 1, City Market, do a general butchering and market business. City orders delivered free of extra charge.

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S. HARRIS HARRING, San Jose, Cal., agent for several breeders of Best Purebred animals and poultry. We bring the breeder and purchaser together direct, and do not stand between them, while we aid each for moderate pay.

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WALLACE & ROBBINS, 386 First street. Handsome hearses always on hand at fair prices. Fine hearse for funerals. Carriages for sale. Give us a trial.

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., August, 1875. No. 8.

A WHITE MAN'S SOCIETY.

We attended a business meeting of the Santa Clara Valley Agricultural Society on 10th ult., and took some notes of proceedings. Mr. A. C. Erkson—an annual member who had paid his fees in advance and was a voting member when a previous meeting passed an order allowing only life members to vote, and which changed the constitution so that annual members cannot vote—was present, and put in an objection, and claimed the right to vote as he had been a voter previous to the change. He would not be disfranchised without contesting his right. After considerable argument, the President decided that he should be allowed to vote this season.

Mr. E. then moved to strike out the word "life" in the constitution, so as to allow all annual members to vote. He regarded it as a serious wrong against the farmers and mechanics who mainly support the Society—men who cannot afford to pay $50 at once, but have freely paid their $5 a year into the Society. He declared that no man with self-respect could hereafter patronize the Society as an annual member, unless the constitution was changed back so that annual members can vote and take part in the proceedings. The imputation that had been made against this class, that they would endanger the property and prospects of the Society if allowed to vote on business matters, Mr. E. thought very unjust. The grounds belonging to the Society have been largely paid for by annual members. He had paid more money into the treasury himself than many $25 or $50 members, who never pay but once.

Mr. C. T. Settle, who had voted to insert "life," now opposed it also. He had talked with a good many interested people, and found that it would not do to make this Society a close corporation. An imputation that the votes could be bought up he thought would apply as justly to inside or life members as to annual members. He did not want to compel outside members to look upon this Society as a "ring."

Col. Younger, Carey Peebles, and J. R. Weller insisted that none but life members should be allowed to vote at their business meetings. Reasons as follows: Their valuable grounds might be endangered if any one by paying $5 could vote on any proposition. Designing persons could bring in votes enough to carry any measure. They had worked hard and long for the good of the Society, without one cent of pay, and would guard their trust with every restriction possible. They meant no injustice or disrespect to honest annual members. Until this question was broached, no annual member had attempted to exercise the franchise in the meetings. They cannot afford to risk this property to satisfy a clamor now. The community should be disabused, and not blame them. The doors were open to life members. They desired the community generally to take an interest in their affairs, etc.

Putting the matter to a vote, it stood 11 to 4 against permitting annual members to vote.

Mr. Erkson then wished the constitution so amended that any member outside of Santa Clara county can hold office in the Society. Killed—11 to 4.

Mr. E., who said that he would do all he could to "purify" the Society, then proposed striking out the word WHITE where it reads, "any white person can become a life member member by paying $50," etc. Voted down—11 to 4.

The same gentleman then moved to strike out the word WHITE as applied to annual memberships. Lost again, although some of the dissenters said they should be willing for the darkeys to buy tickets and attend the fair.

We will not append any remarks of our own, but leave our report of this white man's agricultural horse-trotting society to the discretion of the public.

EFFECT OF LAST SPRING FROST.

The high price of fruits this season is something unprecedented, if we except the times when orchards were scarce. The early reports of prospects for short crops were not overdrawn. Even the blackberries that bloomed after the spring frosts are very short indeed. Several patches near San Jose have failed entirely. Others have not produced one-tenth of a crop. For instance, Mr. Bird's eight acres, that produced seventy chests per day last year for weeks together, is yielding only five chests per day this season. The San Jose Canning Factory contracted for all that several vineyards produce at 6 and 7 cents. Last year they got all they wanted for 2 cents. The crop is so short that dealers have to pay nine cents by the chest, and many orders from a distance cannot be filled. The local demand is greater than the supply. As to other fruits the San Francisco markets govern ours, and much of the fruit used in San Jose is shipped from a distance. On an average, it sells for less in San Francisco than in San Jose, notwithstanding that San Jose is one of the finest fruit growing districts in the State.

List of New Advertisements.

Sheep Wanted—Box 32, Carson City, Nev.
Sewing Machines—A. C. Perkins, San Jose.
Dental Firm—Hooker & Finigan, "
Wagon Shop—Limirick & Muthwillig, "
Goats for Sale—Shans & Belknap. "
Plumbing—E. G. Wilson, "
Dentist—Dr. Spaw, "
Real Estate—J. A. Clayton, "
Poultry—Mrs. Watkins, Santa Clara.

It is wonderful how much time will be coosumed daily on a farm in doing a few chores. To sit down and make a calculation, after knowing just what one has got to do, it would be easy to condense into one hour what it will take two to three hours "to get round to." We have undertaken a job of this kind this season, for "fun," of course. We find by timing it that we can milk four cows in thirty minutes. It don't take us longer to drive the cows up, water them, feed the pigs, "put the chickens to roost," or do any other separate thing than any other person would use, yet we can manage to worry out some four hours daily, on an average, choring around, getting wood, water, milking, making butter, etc., and doing what seems necessary to be done in choring on a farm.

A man's surroundings, says Mr. Colman of the *Rural World*, are a very fair indication of his character. A home surrounded by a dilapidated fence, part rail and part plank; the posts propped up to hold the frail concern in anything like an upright position; the few old peach trees in the front yard leaning over the fence; the lawn decorated with Jamestown, dock and iron weeds—presents a sorry sight when placed in contrast with a home surrounded by a neat, upright fence, a gate well hung, and the yard planted with (it may be) a few well grown, thrifty looking peach trees; while scattered here and there are a few conifers or evergreens, a few flowering shrubs in clumps, and one or two flower beds or borders; the lawn covered with blue grass and kept in a trim and neat condition; the walks free from weeds, and raised well in the center so as not to necessitate the use of planks for walking on in muddy weather.

"He is an enemy of the State who desires more land than he himself can use," was a motto of Rome in the days of her greatest advancement and prosperity. Slavery and land monopoly was at last her ruin, and caused the downfall of the most powerful civilization of ancient times, by depleting the population and destroying the patriotism of the people who became homeless and dependent, and corrupting the rest.

Home is the foundation of freedom, patriotism and country. Land monopoly is one of the greatest curses that the world has ever seen. There is danger that our country may yet fall beneath its terrible power. There is no State in the Union more cursed by fraudulent land transactions than is California. Abused law and rascally lawyers have accomplished for designing villains what force could never have undertaken. The people have tamely submitted, and land monopolists are even respected. We hope the time will soon come when such men cannot hold offices of trust in the gift of the people.

Benj. Casey. S. H. Herring.

California AGRICULTURIST AND Live Stock Journal.

S. HARRIS HERRING & CO.,
Editors and Publishers.

OFFICE: Over the San Jose Savings Bank, Ralbach's Building, Santa Clara Street, near First, San Jose.

SPECIAL TERMS TO AGENTS.

RATES OF ADVERTISING.

Per one Column	$15 00 Per Month
" half Column	8 00 " "
" fourth Column	4 00 " "
" eighth Column	2 00 " "
" sixteenth Column	1 00 " "

☞ We are determined to adhere to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

We are glad to note, in the interests of producers, that the price of wheat has advanced very materially. We believe that the raise is a healthy one and must continue until another season.

A report from Kansas says that alfalfa has been fully proved to be as valuable in that State for forage as in California. Neither drouth nor grasshoppers kill it. It looks luxuriant and is considered to be the best grass for Kansas.

Uncle Ben acknowledges the receipt of two letters from our little readers, but not in season for the Boys' and Girls' department this month. Next month he promises to give the children a nice treat, and hopes every boy and girl who ever reads the AGRICULTURIST will send him a letter. Cannot the fathers and mothers encourage them to do it? He wants lots of letters, so that he can always make up a department for boys and girls worth reading—an original one, alive and as spicy as a nutmeg.

It is a safe policy to always sell grain and hay when it commands a price a little above an average, and generally safe to hold onto these products when prices are low, for a raise. Those who hold for a big thing generally lose, while to sell at a very low price is not a sound financial transaction. The farmer who is not a little sharp in such legitimate matters is sure to be taken advantage of by somebody. We are often asked for advice. Our answer must always be, watch the markets as reported in daily and weekly papers; depend upon your own and your good neighbor's judgment.

Mr. Wm. Landrum, of Watsonville, recently passed through San Jose, on his way to Oregon with a lot of his pure-bred Angora goats. Oregon promises to be a fine country for these animals, and there bids fair to be a lively demand for all the California breeders can spare from their flocks.

Pro-per Wheat.—This is a variety of bearded wheat which has this season yielded on dry soil at least one-third more than the Australian and Sonora beardless varieties. This is the experience on Mr. A. Woodham's farm, near Santa Clara, this season, and the beardless wheat had the advantage of earliest sowing, too. Another thing in favor of the bearded wheat is this, it will not thresh out in the field by the wind, as the beards protect the heads from striking sharply together.

Col. Younger thinks we did his stock an injustice last month in the article about Mr. Clark's farm. We did not intend to, and are willing to make such correction as may be proper. The Col. has been breeding for fine form, and has taken more first premiums at state and county fairs for fine cattle than any other man in this State. In every fine herd there will be some animal not so fine as the rest. Mr. Clark's Younger cow was purchased second-handed, and is not by any means equal to his average run of stock. Col. Younger has lately sold a yearling bull of his Short-horn stock for $500, and a heifer and two young bulls for $900.

The Domestic Department, this month, will be found unusually attractive. A frank acknowledgment on the part of a correspondent last month that she had poor success in making bread has "brought down the house." We wonder if the out-of-doors farmers would be so ready to help a fellow out of trouble if he would acknowledge that he did not meet with success in any particular branch of his farm labors? We honor those who are not afraid to ask for advice. We know that there are many farmers who are lacking in best practical methods and application in important matters, and we have traveled enough to know that good cooking among farmers' wives is as often the exception as the rule. An ambition to improve is always commendable.

A good quality of butter depends quite as much upon a good quality of feed for the cows as a good quality of pork does upon the feed the swine has to eat. The best butter is not made from either the greenest grass nor from dry feed, but is made when green feed is rich in nutritious matter, say about the time of blossom and before the seed is shattered out. Dry feed of good quality like good wheat stubble, will make butter that will keep well, but it has not the "grain" of butter made on greener feed. Alfalfa will make good butter the year round. Cows running in stubble fields should have roots or some green feed if you desire the butter to be first class and of good color. It will pay any dairyman to so plan it that he can have dry feed for his cows once a day when feed is green, to give the butter substance, and green feed when pastures are dry, to give texture and color to the butter.

Political corruption has it root in, and draws its main support from the corrupt newspaper press—a press that can be subsidised by central committees and candidates for office. An agreement to advocate the interests of any man or party carries an obligation to oppose the opposite man or party. The editor who is subsidised is hardly capable of expressing an honest opinion, and is surely not to be trusted. He gains the confidence of the people by subterfuge, to carry out the schemes of dishonesty, claiming at the same time to be working in the interests of the people. He is paid to deceive. The politician who pays him does so hoping for a chance to get even when he gets into office. He who subsidises can be subsidised; and the subsidised editor is paid to cover up as well as to support. Honest politicians and honest papers are so scarce that we know not where to point one out.

The remedy for political corruption is in a system that will drive out bad men by ceasing to offer inducements to them to seek office, and that will at the same time offer inducements to honest, patriotic and philanthropic persons to accept offices of trust and duty. A strictly conscienciens man cannot consent to be assessed to pay whisky bills and lying newspapers, but would be willing to do what he could for the public good for a workingman's wages at any time. The unscrupulous politician seeks office for the *pay* it promises, and the more pay there is in it, really and prospectively, the more corruption funds he will dispense to obtain office. If our premises are correct, then to reduce the salaries of public servants to the standard of wages earned by the industrious farmer and mechanic will be expedient. One temptation to use corrupt means to obtain office will be destroyed. Monopolists may still endeavor to elect men to further their ends, but even their Sampson will be shorn of his strongest locks.

Our lady readers who are fond of flowers (and who of them are not?) will find it policy to sow seeds of perennial plants either this month or next, and have their plants blossom next year. Pinks, Sweet Williams, Stocks, Wall Flowers, Columbines, Snap-dragons, Hollyhocks, Hibiscus Penstemon, Lark Spurs, Daisies, Garden Rocket, Cannas, Four O'clocks, Campannlas, Foxgloves, Shrubby Cypress, Oswego Tea, Polyanthus, etc. It is best to plant in boxes. A peach box six inches deep, with four inches of fine soil in it, on which to place the seeds, then cover the seed one-half inch with sand, is a good thing to use. Set the box out of the wind and where the sun will not strike it during the heat of the day. Keep the soil constantly moist by watering until the plants are up and growing nicely. When the first winter rains wet the soil you can transplant into the garden if you choose; or, if the seeds come up thickly, transplant sooner into some favorable place. By a little pains, in our favored climate, you can have all these perennial plants in beautiful condition to blosson early another year.

The coming woman—Annie Versary.

Poetry.

Straw Stacks.

BY KATE A. M. RAMSAY.

THE leafy bowers are sung of, and the seats 'neath the primrose hedge,
And the seats by the shady maple, and the nooks by the water's edge.
There are lines to the vine-clad arbor—cool refuge of summer time;
But the charms of a cheerful straw stack I never saw in rhyme.

Sometimes I chance upon one, in my plodding, rural way,
And am truly, surely tempted to indefinite delay,
And seeking its sunny corner, I build my castles there,
Those well-known, royal structures that disappear in air.

I dream of joy and sweetness; all hard paths fade away,
And only my hope and the sunshine illuminate the day.
Then, wooed by the brooding quiet, I count my blessings o'er,
While the blue, soft sky entreats me to think of clouds no more.

I fashion plans for the future, where I'll get a new book every week,
And tickets for concerts and lectures whenever I choose to speak.
I muse o'er my sometime travels, when "my ship comes over the sea,"
And visions of Rome and Paris in my journeyings come to me.

I shall see the Vatican famous, and behold the world renowned toe
Of Pius now reigning so widely—infallible man, you know
I imagine I see St. Peter's, and standing awe-struck 'neath the dome,
I wonder if it is a cathedral, and I am at last in Rome.

In "merry England" and Scotland, in Ireland, too, I must roam,
Going over the bogs and marshes, to kiss the "blarney stone."
Just here my thoughts are scattered. Blue-eyed brother Ben finds me out;
A picture of brown-faced wonder, he says, "What are you about?

"I've hunted and hunted an hour, and can't find any fish-line;
I want to go fishing with Charley, and ma says it's tea-kettle time."
I rise up and leave quite reluctant, but my feeling of unrest has flown.
And richer I feel for that hour spent by the big straw stack alone.

Modern Ethics.

BY HELEN E. CLINTON.

It may be sound philosophy,
As pertinent as brief,
To name a man a financier
Who should be called a thief.

It may be a Christian charity,
That looks with lenient eyes,
And says a man exaggerates,
When I should say, "He lies."

It be modern purity
To say a man is "fast,"
Who drags his victim down to death,
Then prates of follies past.

It may be modern justice true
That hurls her to the ground;
I'd hold the trembling creature up,
And strike the scoundrel down.

Labor.

Toil swings the ax and forests bow;
The seeds break our in radiant bloom;
Rich harvests smile behind the plow,
And cities cluster round the loom.
Where towering domes and tapering spires
Adorn the vale and crown the hill—
Stout labor lights his beacon fires
And plumes with smoke the forge and mill.

The monarch oak, the woodland's pride,
Whose trunk is seamed with lightning scars,
Toil launches on the restless tide
And there unrolls the flag of stars;
The engine, with its huge of flame,
And ribs of brass and joints of steel,
From Labor's plastic fingers came,
With sobbing valve and whirling wheel.

Here sun-browned toil with shining space
Links lake to lake with silver ties,
Strung thick with palaces of trade
And temples towering to the skies.
'Tis labor wores the magic press
And turns the crank in hives of toil,
And beckons angels down to bless
Industrious hands on seas and soil.

Keep the Heart Light as You Can.

BY CHARLES SWAIN.

We have always enough to bear,
We have always something to do;
We have never to seek for care,
When we have the world to get through.
But what though adversity's test
The courage and vigor of man,
They get through misfortune the best
Who keep the heart light as they can.
Though there's always enough to bear,
There is always a something to do;
We have never to seek for care
When we have the world to get through.

If we shake not the load from the mind,
Our energy's sure to be gone;
We must wrestle with care, or we'll find
Two loads are less easy than one.
To sit in disconsolate mood
Is a poor and a profitless plan;
The true heart is never subdued
If we keep it as light as we can.
Though there's always enough to bear,
There is always a something to do;
We have never to seek for care
When we have the world to get through.

There's nothing that sorrow can yield,
Excepting a harvest of pain;
Far better to seek fortune's field,
And till it and plow it again.
The weight that exertion can move,
The gloom that decision may span,
The manhood within us but prove;
Then keep the heart light as you can.
Though there's always enough to bear,
There is always a something to do;
We have never to seek for care
When we have the world to get through.

Follow Up the Plow.

BY WILL S. HAYS.

Hard times are now upon us,
And the people are in debt;
The country's full of trouble,
And the worst is coming yet.
'Tis but without its causes,
And we'll plainly tell you now,
The only way to stop it
Is to follow up the plow.

Chorus— Then follow up the ploy, boys,
Follow up the plow;
If you would build the country up,
Just follow up the plow.
Then follow up the ploy, boys,
Follow up the plow;
If you would build the country up,
Just follow up the plow.

Fill up your fields and prairies
With a crop that's "good as gold,"
And mine your hills and valleys wide,
For iron, salt and coal.
The earth is the producer,
And she can tell you how
To make a princely fortune—
'Tis to follow up the plow. Chorus.

There are too many people
Who from their duty sh rk,
Who'd rather make a fortune
By some other means than work.
The man who plants potatoes
Corn, wheat or cotton now,
Is king among the "moneyed men:"
He follows up the plow. Chorus.

Farmer's Song.

'Tis writ in records of the past,
And all the days of yore,
It will be in the present time,
Till time shall be no more,
That all the wealth, and power, and might,
Attained by human hand,
Is taken from, and built upon,
The precious, fruitful land.

Realms and nations now are built;
Great scepters, thrones and crowns,
Gigantic cities, towering high,
And o'er the earth fair towns;
But from their lofty hight could be
To desolation hurled,
Did we but stretch our hands on high,
And cease to feed the world.

The vaunted hight that idlers gain,
Proud rulers of the land;
Who wield the might of armies, too,
Which move at their command;
They fain look down on us, we see,
The proud lip then is curled,
Think not, proud lord, we'll serve you long;
'Tis we who feed the world!

The low shall learn their power in time,
That thrones are useless things,
And crowns of honor by and by,
We'll give our real kings;
'Tis those who feed, and those who teach,
Who then shall rule the land,
And rulers then, in that good time,
Shall move at our command!

—[Western Rural.

Sow to Reap.

Ever so little the seed may be,
Ever so little the hand;
But when it is sown it must grow, you see,
And develop its nature, weed, flower or tree;
The sunshine, the air and the dew are free,
At its command.

If the seed be good, we rejoice in hope
Of the harvest it will yield.
We wait and watch its springing up,
Admire its growth and count on its crop,
That will come from the little seeds we drop
In the great wide field.

But if we heedlessly scatter wide
Seeds we happen to find,
We care not for culture or what may betide,
We sow here and there on the highway side,
Whether they've lived or whether they've died,
We never mind.

Yet every sower must one day reap
Fruit from the seed he has sown;
How carefully then it becomes us to keep
A watchful eye on the seed, and seek
To sow what is good, that we may not weep,
To receive our own.

The Sower.

BY D. W. C. PACCARD.

Sow, farmer, sow, for the seeding time is here,
Plant for the future and sow for the year,
But weed out the thistle, and root up the thorn,
Make room for the apple, the wheat and the corn.

With foot on the spade, and with hand on the plow,
With grime on the palm, and with sweat on the brow,
Press onward, brave yeoman—thy vessal shall be
All green earth that stretches betwixt sea and sea.

The roll of the thunder, the best of the rain,
The wind of the mountain, the breath of the plain,
The shimmer of moonlight—the dew, and the sun—
Shall aid thee and cheer thee till Harvest is won.

Move on to the front, then, with shovel and hoe—
The coro field shall rustle—the hillside shall glow—
And Plenty and Peace shall abide in the land
Which Labor hath conquered and Freedom hath planned.

Centinela Orange Grove.

The Los Angeles *Express* of June 11th says: It probably is not generally known, but this young grove will be the largest orange orchard in one inclosure in the world. It covers nearly three hundred acres of the choicest land in the Centinela valley, and contains some 13,000 orange trees nearly five years old. Planted between the rows are some 2,500 almond trees, now three years old. The almonds will bear this year, and will yield about six pounds per tree. In two years they will easily yield twelve pounds per tree, or $6,000. Two thousand lime trees four years old, are in this orchard, and they will in two years yield $5 per tree, or $10,000. The almonds will be dug up as soon as the oranges begin bearing. In the meantime, they will pay the entire expense of attending to the orchard. The orange trees will commence bearing in five years. Two years later it is reasonable to suppose they will yield 1,000 oranges to the tree, which at one cent apiece, would give an income of $130,000. As they will hardly ever sell for less than one and a half to two cents apiece, an income of $200,000 to $250,000 from the Centinela orange grove is a quite reasonable expectation. The fruit will be of a fine quality, as the oranges grown at the Centinela Ranch House are large and luscious.

ORNAMENTING HOME.—The green house, flower beds, lawns, drives, ornamental trees and shrubs receive considerable attention, but not as much as they deserve. Remove all attempt at such things from any place and its value is decreased at once in a very large proportion. It is money well spent. There is no lesson of more importance than to teach the art of making home pleasant. This is one of the ways to keep the boys and girls on the farm, and to make them satisfied with their situation. For the want of something nice many a boy has left the country home, made a poor lawyer, or clerk, who would have made a good, successful farmer.—*Prof. W. J. Beal.*

WORK FOR THE SEASON.

Of course it depends upon circumstances, which every farmer should be a judge of, as to what work most needs to be done at this season of the year. It is generally looked upon by grain farmers as a season of rest, unless they have to haul their grain to market or the storehouse. In that case it is policy to improve the dry roads and weather at once.

Dry plowing and sowing can now be done to advantage on land that is clear of bad weeds and foul stuff. On none but clean land should dry sowing be done, but dry plowing—the soil to be plowed again after the weeds get started—will do even for foul lands. However, we cannot advise dry plowing as economical excepting the land is clean of foul seeds.

FENCING.

If any fencing is to be hauled, now is the time to do it. There are few farm in California so well fenced as to be convenient for stock-keeping. It will pay almost any farmer to so lay out and fence his place that he can economically pasture a portion of his farm every year, in the way of rotation, and be able to pasture a portion without herding. On dry farms, this is an important matter, as a field pastured this season will be much more likely to produce a good, clean crop of grain than one that is cropped to grain every season. It is the testimony of many good farmers that pasturing a field is as good, if not better, than summer-fallowing it, both as regards getting a clean crop and a full one. We are compelled to have much faith in pasturing to precede wheat culture, either of cattle or of sheep. Probably sheep would be preferable. So we say that it is important on dry ranches that farms should be well fenced where stock-keeping can be made profitable in connection with grain raising. On farms that will every year produce a good crop no argument is necessary to convince an intelligent farmer that it is to his interest to so fence that he can keep stock to advantage.

Of course setting posts or driving pickets is something that is best done when the soil is softened by winter rains. But if one gets everything ready and at hand for the work it will be greatly facilitated. This is also a good season to look out for and collect

FIRE WOOD FOR THE YEAR.

Chopping is hard work in hot weather, but let any farmer take his wagon and hired men and go into the timber prepared to camp out for a week or two and make a pleasure as well as duty of it, working in the cool of the day only, and resting when it is hot and they are tired, and our word for it, he would find it a recreation better than riding over dusty roads to town to spend his time in saloons or on street corners talking politics and spending money as well as time foolishly, as too many farmers do that we know of.

BUILDING A HOUSE.

This is a good time for building either a house or any needed out-building. How few farmers have habitable houses, such as a wife and family of children require to be comfortable, such a house as they will take a pride in calling *home*—HOME, the most sacred of names—a place that should be consecrated to every good that life is capable of enjoying—the center of our affections and the scene of our dearest joys. It should be made a comfortable abode for our bodies, convenient for the arrangements of the household, so handily arranged in every way as to make house-keeping as little laborious as possible, well supplied with air, sunlight and shade, with water pure, and surrounded with such attractive features as the cultivation of trees and flowers will always give. Paint and whitewash should never become too dingy, but reflect from without the brightness and light that shall be an index of the lives and cheerfulness within.

In building a new house, don't set it nearer than three feet to the ground. Let the wall be high, the windows large, and if you don't build but half of the house at once, let that half be substantial, and let it comprise an ample kitchen, as conveniently arranged as you can contrive it; and if you have to wait, let the parlor be the last room added. Remember that pure air and sunshine are blessings that we should never debar from our living and sleeping rooms and contrive accordingly.

FARM OUT-BUILDINGS.

A roof to shelter stock as well as straw and hay should be also considered a necessary part of every farm. An expensive barn is really not the most desirable thing on a farm in our climate. They may need such things in Maine and Minnesota, but in California a shelter from rain and winds is all that stock requires, and a shelter from the rain is what straw and hay need. We have studied a good deal upon this matter of farm out-buildings, and have come to the conclusion that the best, economically considered, buildings for hay and stock are sheds, so arranged about the stock yards that they will break the prevailing winds, shelter the hay and straw and stock at the same time. Last March we called attention to some on Mr. A. N. Story's farm that come near being the right thing. Mr. S. has a thousand feet in length of these sheds, the cost of which did not exceed $1,000, or one dollar a foot, running length. We reproduce our description:

"The main part of the building is 16 feet across, length of posts 12 feet, sided up on one side only, and covered with four lengths (two on each side) of six-feet split clapboards. On the open side there is an extension of two lengths more of clap-boards, resting upon a plate supported by strong posts, 10 or 12 feet apart, making a wing shed 10 feet wide for the stock to stand under, making the total width 26 feet. The main portion of the building is used to mow away hay or straw. It is pitched in through openings in the back side of the building. This manner of storing saves high pitching and is even handier than stacking. When the cattle commence feeding under the sheds they stand to the mow but are prevented from reaching beyond the length of their necks by a strong bar. Feed cribs extend with this bar clear around the inside of the buildings. As the hay or straw is eaten away it is an easy matter to go along with a fork and poke down more, so that one man can, in a short time, twice a day, feed the stock all the hay they will eat up clean."

The shed portion of this building may be sided up if one desires it so closed, but where wind is broken away by trees, by high fence, or by a similar building opposite, it is even better for stock open than closed. Two or three such buildings a hundred feet long, so arranged as to break the wind from the stock in the corrals and under the sheds, will be found convenient on any farm, and in this mild climate, we believe they would answer every purpose better than a big barn.

SAVE THE STRAW.

There is less need of this injunction than there was some years ago. Farmers are not burning straw now as then. Still, there are too many who do not appreciate its value, and who allow it to lie scattered in the field to be destroyed. The man who will question the economy of stacking his straw for the use of stock, should seek the advice of his thrifty neighbor.

SELLING STOCK.

If there is to be any thinning out of stock for beef, if any one or more of the cows or calves are to be sold, make up your mind which ones to dispose of. Don't sell the best milk and breeding cows at any price. Select the heifer calves from the choicest stock to raise. Sell off the ordinary cows and calves, and turn off as much beef as you can. The high price of hay, and the prospect of another dry season, warrants a close culling amongst stock of all kinds. Remember that it does not cost much to winter a calf, and save the best, or if you buy stock to increase your herds, buy the best calves.

It is poor economy to keep more horses than are needed on a farm. They will soon eat their heads off. Better raise something that will bring cash for beef, mutton or pork. Now is a good time to make plans for disposing of all surplus horses at as good a price as possible, but at some price. The large amount of emigration to this State should have the effect to give a better demand and price to horses.

MAP THE FARM.

Lay it out into such sized fields as may suit your ideal, and carry out your idea of a proper system of rotation. There is a good deal in laying off a farm to fence and cultivate properly, so that the buildings will be in the best place and so that the fields will be handiest for all purposes. An eye for beauty should always accompany every improvement. The orchard should be where it looks the best as

well as be in the best place for an orchard. The house should be on high, healthy ground, and every tree that is planted should be in the best place for it. The good wife should be consulted in every improvement that is contemplated. They who together make a home can best appreciate it, and will become attached to it as every one who has a home should be. The matter of

IRRIGATION

is one which concerns many farmers. Is not now a good time to take into consideration the ways and means for irrigating the farm, or at least some portion of it? Is it possible for you, either alone or in connection with your neighbors, to bring the waters of some stream upon your farm in the winter when water is running to waste? We know of several farms in this valley which might be made to yield abundantly with winter flooding that now are unprofitable from the lack of moisture; and these same farms are so located that they could easily be flooded in winter by a little co-operation among the owners.

Every farm should have an orchard and garden.

A WIND-MILL

is something within the reach of almost any one owning land. Where the prevailing winds blow in opposite directions, as they do in almost all our valleys situated between long ranges of mountains in California, a stationary mill—that is, one without a turn table—is good enough for all practical purposes, and may be made at home. Let the frame be very heavy and strong—made to stand. The shaft can be either wood or iron. Make the fans long enough to give several horse-power. Bore one or two wells for large-sized pumps, and let the mill run all the time. The water can be stored in a tank, the bottom of which is level with the ground, and run in furrows over as large a surface as the supply will allow. A good mill and pump, running whenever the wind blows, will irrigate several acres, if economically handled. It is well to have the mill so located that stock can be watered in either of the fields where they are allowed to run, with as little expense for water pipe as possible. For house use there should be a tank higher than the house, with force pump to raise the water into it, by wind power, and the same power should be utilized to do churning, etc. Those who can afford it will find an extra wind-mill for this purpose, with pipes running through house and barn, a most convenient thing. Why people in the country cannot have things as convenient as they do in the city is more than we propose to explain.

There is much more that might be said under this head which would appertain to specialties, but the foregoing hints on general principles we offer for what they may be worth as suggestions merely.

The farmer who toils for 40 years gathers knowledge and experience costing more labor, weariness and anxiety than the education of any other professional man costs; and then the avowedly professional man charges ten times as much for his advice and work as the farmer does; and in case of a dispute as to a fee, professional men are called in to say what is right, while the old farmer has to abide by the professional decision whether it be for or against him.

LETTER FROM OUR TRAVELING AGENT.

Eds. California Agriculturist: The success I have met with in a five-weeks canvassing trip for your journal, the affable and kindly spirit with which I was everywhere received, especially by old subscribers, and the grand prospects of the Agriculturist in the counties through which I have just traveled, all incite me to give expression to a few ideas picked up during my recent trip. Being well acquainted with the high character of the Agriculturist, I was confident from the very beginning that it needed only a proper representation, a simple unfolding or explanation of its characteristics, to commend it to all lovers of the good and pure. Need I say that a discriminating public nobly responded in support of the Agriculturist, which they unhesitatingly designate a champion of truth, morality, temperance, and the farmers' movement?

A short visit to Washington Corners, Alameda county, will reveal the most flattering signs of prosperity. The crops in the vicinity are good, when we take into consideration the dryness of the season. A large and elegant school house is being erected. A newspaper, called the *Alameda County Independent*, is published there, while Washington College was never in a more prosperous condition than now.

Mission San Jose, and, in fact, the entire country along the foot-hills, from Niles Station to Warm Springs, can boast of excellent crops. I visited Mr. Beard, at the Mission, and obtained from that gentleman much information regarding Alameda county in general, and Mission San Jose in particular. Mr. Beard, besides a magnificent orchard of apples, peaches, pears, etc., and several hundred acres under vines and grain, has about 600 olive trees produced from cuttings After experiment, he finds that the best time to plant them is in the fall, and that cuttings from young trees are the best. They commence to bear when about five years old, and are in full bearing at eight. So well have these trees throve that from one tree alone 120 pounds of olives were obtained.

Mr. J. C. Palmer, of the Mission has a fine vineyard of about 80 acres, all in excellent condition, and promises to bear immensely.

The crops in the vicinity of Centreville, Alvarado, Mt. Eden and Hayward are fine, and will compare favorably with those of any other portion of the State. A post-office has lately been established at Niles Station, some new buildings are being erected, and the town is fast developing.

George Buttner, an old resident of Sunol valley, has recently built a large and commodious hotel at Sunol Station. The farmers along the valley are much pleased with the prosperity of the crops, and may compliment themselves on having one of the finest agricultural valleys in the State.

Livermore cannot boast of the fertile soil of Hayward, Mission San Jose or Alvarado. A gravelly soil predominates, and the crops this season are at a serious discount. I visited the new coal mines, about eight miles from Livermore, and have every reason to consider them a success. Already a shaft of 375 feet has been sunk. The vein is about five feet thick and of an indefinite length and width. Eighteen men were at work, and an additional force will be employed as soon as a new steam engine is erected, which will probably be in a few weeks. The coal is of a bituminous quality, and is selling at $4 per ton at the mine. Mr. Thomas Harris, a practical collier, is the superintendent.

San Ramoan valley, including Pleasanton, Dublin, Limerick, Danville, Alamo and Walnut Creek, is one of the most fertile valleys in the State. The crops are looking splendid. The late rains, however, caused considerable damage in throwing down portions of the crops which were very heavy. The farmers here are seriously discussing the propriety of having a railroad through the valley, and advocate the scheme with much warmth. The course taken by the Contra Costa *Gazette* in disapproving of the enterprise is severely criticized, and rumors are afloat that another county paper devoted to the vast interests of Contra Costa will soon be established.

The crops from Altamont to the Mountain House are a veritable blank. Several of the farmers in this section have already taken flight to a more congenial clime. Very little of the animal creation greets the traveler, save squirrels, lizards and owls.

The country from the Mountain House to Point of Timber is more prosperous, leaving, however, ample room for improvement. Point of Timber is a rich agricultural country, well shaded with trees. The farmers in general manifest evidences of much prosperity, and have had a good three-fourths crop.

About two miles from Point of Timber are the salt springs which your correspondent visited, and learned from several persons there that these springs, for medicinal qualities, are second to none in the State. There are, however, no accommodations for visitors, the absence of which will necessarily prevent many from partaking of the advantages which, under different management, might be enjoyed by the health-seeking public.

The country around Antioch is hilly and the soil rather barren, consequently the crops are not like those of Eden Plains or Point of Timber. The town itself is quiet, and people complain that "money is scarce around that quarter," and yet the Agriculturist circulated as freely in that section as in more favored districts. We hope that a better state of things will soon be brought about, and that the generous people of Antioch and vicinity will have to build additional warehouses wherein to store the produce of next year's crop.

Passing Summersville and Nortonville—cities of coal mines, steam engines, heat and hills, we slide down into Mount Diablo valley, one of the finest in California. Well shaded with trees, liberally supplied with water, the soil rich and adapted to raise almost all kinds of fruit and vegetables, with many a fine vineyard and farm house, and Diablo in the distance, boldly and majestically looking down from an eminence of over 3,000 feet, we unhesitatingly say that the people of this valley may justly feel proud of their situation. And there is Clayton, the queen village of

Contra Costa county, beautifully shaded with trees in the heart of this lovely valley.

The crops here are fine, and almost continue so until Martinez is reached. Leaving Martinez, quietly nestled down on the Sacramento river and almost surrounded by hills, passing Benicia and her arsenal, your correspondent arrived at Vallejo. Still onward, from Vallejo and her navy yard to Napa City. The crops in this section are what we might term average. The new Insane Asylum is in process of completion, and judging from the immensity of the building, or rather series of buildings, the uninitiated would imagine that all the wrecks of intemperance in the entire State could be conveniently accommodated within its walls.

Towards Sonoma the soil is far more fertile than in the vicinity of Napa. With its surroundings, the town of Sonoma itself presents an alarming contrast. In the heart of a rich, prosperous, well populated country, it seems given to decay and death. It presents very little evidence of prosperity, but it is hoped that ere long its lost prestige will return, and that it will take its place among the prosperous towns of the coast.

Petaluma is one of the liveliest towns through which your correspondent passed. It is evidently on the high road to prosperity.

The late frost caused serious damage in nearly all the places I have visited. Mission San Jose, Hayward and a few other places might, indeed, be excepted. The farmers, however, express themselves satisfied with the general yield.

Returning thanks for the many courtesies extended to me during my trip by friends of the Agriculturist, I beg to subscribe myself,

Very respectfully, G. G. H.

A CONSERVATIVE ORGAN.

If the *Rural Press* of San Francisco is not a conservative organ, then we admit that our senses are so prejudiced against it that we cannot see straight. Were it really run in the interests of those who seek to monopolize all the benefits that can accrue from imposing upon the credulity of honest Grangers who rely upon representations of this same class, we can conceive of no more subtle policy for its conduct than its present stoical conservatism.

The Granger movement was started on radical principles, loud and earnest for reform. Its design was to correct the many evils that were, and still are, bearing heavily upon industry, and which make the producer a subject to be fleeced by greedy capital and its manipulators, and by smaller speculators upon the necessities of the people. The movement called out nearly every patriotic farmer, and many who felt the heavy load of oppressive tribute they were paying went in with a no less hearty determination because impelled by a selfish motive.

It is perfectly natural that such a movement, which embraced the sons of the soil, and which called for active measures and offered remuneration to organizers and others, should have barnacled upon it scores of designing, shrewd men who were anxious to profit by the tidal wave, and had the cheek to put themselves at the very wheel, as captains if necessary, to make themselves popular and "representative," and give them at once honor and coin.

The principles and true spirit of the Grange, or farmers' movement, to-day, are radical. How so conservative an organ as the *Rural Press* is can suit the Grangers all over the State is to us a little wonderful. But a paper run strictly on *policy*, as that paper is, of course is supposed to be shrewd enough to manage all that.

We are aware that there are many things connected with this Grange movement that need sifting rather fine, and we would like to see the Grangers' volunteer organ take up such matters as need over hauling and thus prove to the honest and confiding farmer that it is really, as well as pretendingly the farmer's friend. We are really anxious that all the good should come out of this movement that is possible. And to be successful, in the broad meaning of that term, the Grange must not be afraid to deal open-handed with those who are using it for personal ends.

We don't believe in covering up nor letting alone corruption of any sort that needs ventilating in the farmer's interest. But then we are not an organ. The Grangers' Bank and Grangers Business Association and Grangers' Emigrant's Bureau do not advertise with us. The big men of the Grange do not patronize the California Agriculturist in any way. We do not hob-nob with them nor hang upon their colored skirts, nor ask any favors of them, and of course we do not feel as much under obligations to these leaders as our contemporary and organ, the *Rural Press*. If we did, which would be impossible, we might possibly appreciate a conservative sentiment and hold our horses with a curb-bit.

Jute Culture.

Mr. Le Franc, of New Orleans, raised last year twenty bales of jute. He concludes a report to the Department of Agriculture as follows:

For new observations, I can re-assert that ordinary jute growth gives an average of at least one ton per acre of fiber, and that the whole cost of production will not exceed $25. In good, moist land jute grows ten feet in average, and has one-third of its body in fiber. The mower and reaper applied on wheat cut jute perfectly well.

Experiments were made in France last year to test how far the humidity of the atmosphere is affected by forests. One set of instruments for recording humidity were placed in the forest, and the other in the open air, a short distance off. The records show that more rain fell each month in the forest than in the open air, and the total rain-fall for six months was 7¼ inches in the forest, and in the open field less than 7 inches.

Correspondence.

Letter from Monterey County.

Eds. Agriculturist: Your valuable paper comes regularly, but I have failed in my duty to you until now. I believe the best apology that I can make is to send you two dollars, as I have kept you out of your hard earnings up this time—but I am very sure that my negligence has haunted me enough on account of reading so valuable a journal without paying for it in advance. I esteem the Agriculturist as being of more practical value to the farmer than any paper I ever read. So far as I am capable of judging, it is sound on all points—with the exception of "moles." I am a farmer of many years' practical experience, and I know the "mole" to be very destructive to gardens.

Perhaps some of your patrons would like to know

HOW TO GET RID OF FERNS, OR BRAKES.

I can tell you how I freed a part of my farm of them, and they were so thick that I could not produce a crop to any advantage. I just cut them off at the ground every two weeks all summer until the last of September. This I did in 1864, and I have not been troubled with ferns since.

TOADS.

I think toads are of great worth in a garden or on a farm. But you must keep your bees up out of their reach, for they eat them greedily. This they do at early night. When the evening is so cool that the bees are not watching about their doors, the toad will butt the hive, and as the bees run out to see what is the matter it catches them. This I have seen them do, and it is "true as gospel."

The late heavy frost did great damage to fruit in this county, but my apple trees are very full and promise to make a heavy yield.

EFFECT OF USING BAD WATER.

I owe you more than money for your able journal. I think it saved me and my four daughters from an attack of typhoid fever. Last fall we were all complaining of headache and felt dull, and had been so for perhaps ten days, and were getting worse. We were not given to headache prior to that time. About that time I noticed a warning in the California Agriculturist and Live Stock Journal against using impure water which put me to thinking, and to investigating. And I found the curbing in my well badly decayed, and the water impregnated with the substance and I abandoned the use of it immediately. I cleaned out a nice boiling spring near by, the water of which we are still using. It was some time before we got clear of that headache. And I believe that had it not been for the Agriculturist we all would have been taken down, and perhaps you would not have been troubled with this letter.

I have been fighting against

A NOTORIOUS LAND SWINDLE

in this county for the last six years. But the grantees procured a patent at a fearful cost—not in money, but through perjury, fraud, and offers of bribery. There is an army of well drilled land perjurers in this State who follow land grabbing for a trade, and they will swear to whatever is necessary to carry out their schemes. I have been in this part of the State for upwards of nineteen years. I have taken great pains in settling upon public lands—lands that the grantees themselves *affirmed to be public, and outside of their grants.*

I have bought and improved two homes in California, but I cannot call them my own to-night. Thousands have shared the same fate, and the work of destruction goes "bravely on." Our sheriff told me the other day that he had just served seventy settlers on the Milpitas grant in an ejectment suit which is another swindle.

As I am not used to writing for papers, excuse "style," etc. With many regards,

Yours, J. C. Gaillard.

July 11th, 1875.

Cultivation of Medicinal Plants in California.

A gentleman who has paid a good deal of attention to the subject of medicinal plants and the study of medicine as well as of agriculture, and thinks it possible to produce such roots, barks, herbs, etc., in California, and who thinks that many of our immigrants might find profitable employment by starting into the business for themselves here, sends us the following hints upon the subject. He begins by advising the cultivation of the olive tree, flax seed and castor beans for oil. Our readers are already pretty well informed upon the foregoing, and for several years quantities have been produced in California with success. The cinchona tree, which produces the Peruvian bark is next treated on. He says:

As to the feasibility of raising in California the cinchona tree, which produces the Peruvian bark, from which quinine is manufactured, there can be no question. Our climate is the exact counterpart of that in which it grows in South America. Being under the equator, notwithstanding the elevation of several thousand feet above the level of the sea, the climate is exactly like our's—a perpetual spring. The English have tried the experiment of its transplantation on the lower benches of the Himalaya mountains in India with success, and the Dutch have introduced it into Sumatra with similar results. For many years past the collection of the bark has been entrusted to Indians, who climb the trees, denude them of bark, and leave them as the white, unsightly ghosts of the departed forests. So extensively has this destructive process been going on, that it has been apprehended that the world's supply of bark would in no very remote future be entirely cut off. Hence the wise forethought of the enlightened nations above mentioned. Shall our's be behind hand? The exhaustion of the Cinchona forests would perhaps be the greatest calamity that could befall mankind. A celebrated physician, being asked what single medicine he would save in case all medicines should be destroyed except one, answered, "quinine." And in regard to its anti-pyretic powers, he was right. It has been found to exert a more direct and lasting effect upon fever, the universal manifestation of disease, than any other article in the *materia medica*. Its priceless worth in the malarial regions of our richest and most extensive valleys and river bottoms is familiar to every physician from Maine to California. That it has been the main cause of the lessening of the death rate throughout the civilized world of late years, there can be but little doubt.

Of the profitableness of its culture on the part of individuals, or of the State, there can be no question. With the bark at 25 cents a pound, wholesale, and quinine from $3 to $5 per ounce, an acre of these trees would constitute no inconsiderable bonanza. Besides, the many thousands of dollars sent out of the country for its purchase would be saved to the State, and its cultivation and preparation for market, and the great number of articles manufactured from it, would give profitable employment to large numbers of people.

"Several years since, a proposition was made before the American Medical Association to introduce the culture, as an experiment, of the Cinchona tree in the different States of the Union. The reason therefor was the scarcity and high cost of that invaluable drug, quinine."

The subject has also attracted the serious attention of the State Medical Society of California, which recommends the cultivation, on the part of the State, not only the Cinchona tree, but also of all other medical plants; in other words, the establishment of four botanic gardens, similar to those in Europe, in four appropriate points in the State where suitable temperature, elevation and soil can be obtained. These, the Society very properly advise, might be located near some of the numerous medical springs to afford cheap resorts to our invalid poor. The subject is still under discussion, and we hope the Legislature may render efficient aid to an undertaking of not only State but National importance.

The Agricultural Department of the State University at Berkeley, if it is not too busily engaged in getting up party "slates" and cultivating political "rings," might do much to forward this and other useful enterprises by raising the cuttings and plants and distributing them free to all who would cultivate them, and by disseminating useful information in regard to the cultivation of this and other valuable members of the vegetable kingdom.

The Department of Agriculture at Washington, if not too busy in President-making, might also lend a helping hand in the good cause. But it seems almost too much to expect anything of governmental departments and office holders. The public good is ignored and self-aggrandizement seems to be the order of the day.

The cultivation of Rhubarb might be engaged in with other articles, we should think. There can be no doubt about its growth here, as any one can convince himself in a moment by visiting our markets and examining the fine, large, long specimens in the shape of "pie rhubarb" there exposed for sale.

The Aloes could be cultivated on our dryest soils.

All the aromatic herbs are already cultivated on a small scale by our market gardeners. There can be no doubt, therefore, about their growing here.

We understand that Mr. Boots, one of our most enterprising farmers, is raising several acres of Peppermint. The sale of oil alone at from $6 to $6 50, wholesale, would amount to many thousands of dollars.

Safron has been raised here by Mr. Frank Lewis, of San Jose, in perfection, and would prove a valuable article of production.

All the various herbs, such as Catnip, Boneset, Lobelia, Geranium, Dandelion, Goldenseal, Hoarhound, Mandrake, Rosemary, Sweet Margoram, Pennyroyal, Rue, Tansy, Wintergreen, Wormseed, Yellow Dock, and many others, might be raised here with profit for the very plain and simple reason that our dry climate facilitates not only the drying and preservation of plants and roots, but also the concentration of all their medicinal qualities in the dried herbs and roots. It would be but a little while, in our opinion, before California dried herbs and roots, like her dried fruits, would command the market of the world.

The oil of Bergamot, used so extensively in perfumery would not yield a bad revenue at $8, wholesale, per pound.

If we have not enterprise enough among ourselves to establish this great branch of productive industry, we might invite the Shakers, who have several societies in different States in the East, to establish a similar institution here. They would find the climate of California far superior to all others at the East in properly and speedily curing all kinds of herbs and roots.

In connection with this subject, we might incidentally call the attention of our orange orcherdists to the manufacture of citric acid and lime juice. Both these articles are in good demand and command remunerative prices.

[Right here we will add that the cultivation of *garden and field seeds* might be made a profitable business in our State for many persons. We have often wondered that more attention has not been paid to such culture. Of course, irrigation would be necessary for many things. As to herbs, our dry, hot climate would give much strength of oil and flavor to them. The ideas of our correspondent are worthy of consideration.]

They Have Come to Stay.

Eds. Agriculturist: What all good Californians have been praying for the last ten or fifteen years—the great tidal wave of immigration—has come at last. It is pouring in upon us through the Dutch Flat Pass like a veritable human wind-fall. It is spreading through our mines and timbered mountains, traversing our rich valleys and extended plains, and crowding our towns and cities. Some come with money to purchase homes; others with muscles to earn them. The former can take care of themselves, but the latter need, and must have, assistance, but all they ask is work.

The wail of business men, capitalists and large land-owners for a number of years past has been for population. "We want settlers to develop our resources, workers to transform our raw material into merchantable values, and consumers to establish at our doors the best of all markets—a home market." This has been the burden of the song sung from the huskings, preached from the pulpit, and printed and scattered broad-cast throughout the civilized world by all the newspaper presses of California. And, as if this was not enough to attract immigration, various towns and cities, through their boards of trade, have published thousands of books in pamphlet form, embellished with engravings of their choicest improvements, and full of "school privileges," "rich soil," "healthy climate," "fine business opportunities," and everything that promised to be attractions. We do not say that there has been any misrepresentation or exaggeration in these statements. Some of them may have come short of the reality; but they have served the purpose intended. They have drawn people here from the frozen regions of the north, the rocky shores of the East, and the miasmatic graveyards of the sunny South. The influences have been extended even beyond the sea, and brought bluff John Bull from "the sea-girt isle," the merry Frenchman from the vine-clad hills of France, the Switzer from his Alpine home, the German from Father-land,

and the sons of Erin in their usual proportion. Now that these hardy, enterprising and industrious, but needy, people have come to our shores, at our bidding, the great question arises, "What shall we do with them."

As the great land-grabbers and capitalists were the first and loudest callers for this influx of population, let them first open their hearts and purses at the same time, and provide these people with homes on their broad acres on liberal terms, supply them with tools and animals, and provisions for a year, and our word for it, they will make a fair interest on their money, besides doing a righteous deed.

Others who have the capital might invest it in manufacturing enterprises that would employ thousands of these people to the great advantage of all parties. There are hundreds of articles imported into this State at a heavy cost of time and freight that could be profitably manufactured here. In the article of wool alone it is certainly a suicidal policy to ship it East in the raw state, and then import it in the manufactured article, paying double freight, when we might manufacture it here and command the markets of the world. We haven't half the sense of our forefathers who separated from the mother country because England attempted to impose this very policy on the infant colonies.

Every farmer, too, throughout the length and breadth of the land, should look kindly upon these immigrants, and employ them upon every possible occasion—as you would your brother, instead of a Chinaman.

Our next Legislature might inaugurate a general system of irrigation—the vital want of the State—before all the water, too, was gobbled up, and thus give employment to thousands of immigrants who will seek our shores in the future. The waters in our mountains would irrigate all our valleys, make California the granary of the world, and provide happy homes for millions instead of thousands, as now. Why should it not be done? ECONOMIST.

SAN JOSE, July, 1875.

A Plea for Cats.

EDS. CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL: Will you allow me a little of your valuable space to say a word for one of the farmer's best, but least appreciated and most abused friends—the domestic cat. I am not insane enough to ask the people dwelling in cities to look with favor on the increase of the cat tribe, but to the farmer I say, *don't kill the kittens.* Drive them out of the house to the barns and other out-buildings, and give them a chance in the fields, particularly in the orchard and vineyard. Make places for them to breed and to escape to when Towser and Bose double-team on them. A dry goods box under the straw stack, with a hole sawed on each side and a six-inch board or pole put up a foot from the ground so the straw will hang over it and give them an entrance to the box, is a good show for a reasonable cat.

In a vineyard it will pay to leave out a pair of vines every ten acres, and throw up a rockery or other shelter for a place for cats. There need be no loss of bearing vines, for the nearest vines may be trained over the place. Perhaps one cat in five hundred will suck eggs or kill chickens, but it is almost invariably the pet cat that grows up among the children and is hugged out of shape and manners that does mischief. The half-wild cat is oftenest seen watching a gopher hole, and when not disturbed there is soon one gopher less to eat roots and let the irrigating water run loose. This age almost worships graceful forms and movements, and the unhandled cat excells in both. Many of your attractive "rockeries," both in public and private parks about the city, would be all the more attractive if they had within a home for cats. A stately Thomas cat perched on the top and half a dozen kittens frolicking about the base is a sight to please a lover of the beautiful and a hater of the rascally gopher.

C. A. WYMAN.

Query About Hay-presses.

SALEM, OREGON, July 15, 1875.

S. H. HERRING & CO.—*Gents:* I wish to know if somebody will send me a circular for a *hay-press.* I do not see any advertisement in your paper, and I do not know where to send for information about them. There is a good hay-press invented and made here, but I thought I could do better in California than to pay $260 for one here. I think the price too high.

We like your paper, although not quite so well adapted to Oregon as to California in some things. Yours, truly,

THOS. C. HAINES.

If the manufacturers and dealers in hay-presses in California do not consult their own interests enough to advertise in the AGRICULTURIST AND LIVE STOCK JOURNAL, it is their own lose.

The two leading presses in California are the "Eagle," manufactured by Kimball & Co, San Francisco, worth $225 or $250 each, and the "Price," or "Petaluma," by Baker & Hamilton, San Francisco, worth $300 to $500 each, according to size. The Petaluma press seems to be the favorite. We give this information "gratis," but at the same time advise our friend Haines to *patronize home industry,* and if he can get a good press for $260 in Oregon, in is probably as cheap as it can be made and pay the workmen, and probably as well as he could do in California.

Domestic.

Chats With Farmers' Wives and Daughters---No. 8.

BY "JEWELL."

MORE bread-making? Yes. I make it a point to *succeed* in whatever I undertake to do, from the sweeping of a room to the making of a perfect-fitting shirt. If it be well done, there is a sense of power that nothing short of knowledge and success can give. It took me nine months, once, to learn how to iron a shirt well; but that very drill was good for me, and I can afford to give time for practical knowledge that is of so much use that even every Chinaman is supposed to understand all about it. So, in spite of my frank confession, I was fully resolved to "try, try again," and the many kind receipts sent me by dear readers of the AGRICULTURIST have helped to push this resolve to a speed trial, and, may I add, *success.* Well, friends, if several consecutive batches of light, sweet, white and tender bread can be called a success, I am the victor. But, alas! I dare not boast, as I have made only one batch of yeast as yet.

A kind reader of the AGRICULTURIST (Mrs. Summers) sent me, by the editor, a bottle of her "jug yeast," with her compliments and directions how to proceed, which were so very simple and plain that I felt "to try were to succeed." The beauty of this "jug yeast" is that one can bottle it and keep a week or two, which is a saving of labor, and we should all try to do that. Here is Mrs. S.'s receipt:

RECEIPT FOR MAKING JUG YEAST.

"Take about one quart of potatoes; pare nicely, and boil in enough water to cover them well. When well cooked, drain and mash smooth. Now take the water they were boiled in, pour it back on the potatoes, stirring all the time. Take a handful of hops, put them in enough water to make a gallon of yeast altogether, and boil for ten minutes; strain into the potatoes; add of salt and sugar each one-half cup; stir well, and then let cool till milk warm, then add a cup of yeast. Now cover up loosely until it commences to work, then put it in a jug and set the cork loosely for one day, when it may be corked tight and kept in a cool place. Shake well before using.

FOR MAKING BREAD,

pnt flour enough for your baking in a bread-dish, make a hole in your flour, put in a cup of yeast, three or four pints of warm water, and a teaspoonful of salt; mix slowly and beat well into a stiff batter; cover it lightly with flour and set it away in a medium warm place. When light mix the flour in slowly till it becomes dough; take it ont on your kneading board and knead it well with your hands, adding flour gradually until it becomes nice, smooth, springy dough, then place jt back in your bread-dish to raise; when light, take it out and knead, using just enough flour to keep it from sticking, till it is nice and smooth, then make it into loaves, put it into pans and keep warm till light, then bake. '

The following receipt by Alice I have not tried, but can vouch for it, as I have eaten of bread made by the same fsir hands that sent it:

"*Dear 'Jewell':* The AGRICULTURIST has just come to hand, so fresh and interesting. And as we feel particularly interested in 'Jewel's' writing, we turned to her department and found her in great trouble about her yeast bread. I felt very sorry for her—so sorry that I pushed back the jar of yeast I had just finished making for to-morrow's baking, and hurried in without coverlng it, and told mother I would just write and tell her how I did, as I was having such good luck at bread-making lately. So here is the recipe, under ma's directions: Peel three common sized potatoes and boil till very soft in a quart of water, then take out the potatoes, mash fine, keeping the water boiling hot. Add two big spoonfuls of fine flour, one of salt and one of sugar. Now, pour the boiling potato water into the whole, stirring it briskly, so that the flour will scald. Steep a pinch of hops five minutes in half a pint of water, and pour in. Let this cool until lnke warm, then add one teacup of fresh yeast from your good neighbor's crock, or from the brewer's. Make the yeast in the morning, and by bed time it will be ready for use, at which time I stir up my bread. For three quarts of flour add one teacup of yeast, and wet it with cold water, mix it soft, and sift flour over the top to keep it all soft and alike. In the morning it will be ready to mould into loaves; put in the bake pan to raise, and when light bake.

"During this warm weather we make yeast

one day and bread the next. We go through the same process of yeast making every time, adding your cup of old yeast from the jar—which article is much better than tin, as it will keep cool and sweet longer. You can make bread of the same yeast as long as it will keep sweet, and you have enough left to start another mess with."

Ah, fathers and brethren and husbands, I wonder if you half appreciate the life and love we women put into your very blood through the stomach, or how tired and weary many a woman grows in attending to her daily round of duties that keep your homes clean, neat and thrifty. If you do, pray acknowledge it in words of cheer. Women need praise for their kindly labors and trials much more than your wonderful new grain-cutter which works so to a charm—and *that* you can praise to a neighbor or your wife, perhaps, without ever a thought of the far greater and more wonderful piece of machinery by your side, whose complex structure combines intelligence of mind with affection, and soul life with so much mechanical power and skill. See to it that you give her equal care and rest you do your horses and iron and wooden machines — oil her with loving words and actions, and bestow equal praise for faithful work, and my word for it, your human machine will last longer, work better; and, more than all, will be worth more in the end than when you first promised "till death do us part." For age should improve as gray hairs add a charm that sunny curls never owned. The wrinkles that have displaced the dimples of youth, should only show where the smiles and joys have left their mirriads of foot-prints behind them. Living and loving together for years must bind our hearts together. Our joys and sorrows one, life's interests the same, our minds and souls will grow more harmonious and sympathetic. Age softens the passions and impulses, elevates the ambition, matures the judgment, and, though more grave, we are not sad, for life begins to grow more comprehensible, and death nearer and dearer to us.

Before closing this rambling letter, I will give a recipe for making

CREAM PIE-CRUST,

something which our country readers can enjoy but which few city folks can. Take flour and seive it with a little soda; wet up with sour cream; roll same as for other pie-crust. It is very nice. Made with Graham flour, you need no soda, nor will it be sour.

Here, also, is a palatable dish, which is called

ENGLISH FRUIT PIE.

Take a deep, round dish to bake in; fill a cup with sugar; turn it upside down in the center of the dish, leaving it there; then fill with fruit, cherries, plums, berries or any kind. If very juicy, no water is added; if not, put in a little water, then put on a crust and bake as for pie, and bake slowly. When served, cut a circular piece and take out the cup, when the juice will fill the dish. Very nice.

GRUEL RECIPE.—For a very delicate sick person, take two tablespoonfuls of Graham flour; stir this with cold water; strain through a seive; stir this into one quart of boiling water, and cook five minutes. Season it with a very little salt and sugar—a little lemon juice added makes it better. This is excellent. Try it. ALICE.

Familiar Talks—No. 2.

BY "SNIP."

I had intended giving my rules for making yeast and bread this month, but it is likely there will be plenty such recipes sent for "Jewell's" benefit, so I will only offer a few suggestions in regard to

MAKING BREAD.

I always knead bread twice. Letting it become just as light as possible in the sponge before moulding into loaves. If, as is sometimes the case, I am obliged to let it stand longer than it should, and there is danger of its being sour, I knead in a little white sugar. I once thought soda was indispensable in such a case, but I do not like to put it in light bread. Sugar is better.

I have tried "Jewell's" plan of cooking rice in a bag, and shall always cook it so when I want plain boiled rice. I make a *substantial* dish of this article by cooking it in the water in which fresh beef has been boiled.

HOW TO COOK CARROTS.

Many think that carrots are unfit for table use. We like them very much when cooked in the following manner: Pare them and cut into slices about a quarter of an inch thick; boil in clear water until done; pour off the water, and cover them with milk in which a very little flour has been stirred; add a little butter, pepper and salt to your taste, and then boil long enough to cook the flour.

Onions cooked in this way make a favorite dish with those who are brave enough to eat this condemned vegetable.

A Farmer's "Jewell."

EDS. CALIFORNIA AGRICULTURIST: Please allow me to say a few words to your new correspondent, "Jewell," before she again gives to the public her knowledge and experience in making bread, and thereby injures our claim to political equality to which our social and moral superiority gives us so sure a title. Immorality and dishonesty in every branch of our political and social system proves the great depravity of the male element; and while the only hope of reform lies in the superior mental capacity of our sex, here comes a "Jewell" of a farmer's wife saying that she cannot make a loaf of bread, but that at last she learned to make salt-rising from her husband, who "knows everything." This may be amusing to her, but it is not so to me, to whom she is pointed out as an example—one who can instruct others, but cannot even make salt-rising without instruction from her lord!

Now, a word to "Jewell." First have good potatoes to make yeast stock by boiling and driving through a colander the potatoes with the water; add for one pound of potatoes one tablespoonful of brown sugar and half a spoonful of salt; add also the water of a small handful of hops; put all of this into a glass jar and keep the air out. This will keep for a month in a cool place. When you wish to make a loaf of four pounds, put three pounds of flour in a dish with some salt, and into this one pint of yeast at least twelve hours old. Mix one teacup of the above yeast stock with three tablespoonfuls of flour and warm water. This will be your sponge. Let this stand in a temperature of about 60 degrees until it has risen very visibly, then, and not before, add flour and work it until it no longer sticks to your hands; then put it into your pan and let it rise again, and bake it under such a heat as to give it one hour's time to bake brown. On the day when you intend to bake bread be sure not to wear any "blue."

CAMP SARA TOGA.

POULTRY AT THE INTERNATIONAL EXHIBITION.

The admirers of fine poultry will no doubt have an opportunity during the International Exhibition to gratify their taste fully, as it is the design of the Centennial Commission to provide everything requisite to the proper reception and display of fowls and birds of every class.

It is desired by many that there be a permanent, as well as a temporary exhibition of poultry, and if applicstions for space for the exhibition of fowls during the six months covered by the exhibition, are received in sufficient numbers to warrant the outlay, the Commission will probably adopt measures to afford the proper facilities.

If the design of a permanent exhibition be carried out, the display should be such as would impress the character of each breed upon the mind of the observer.

This cannot be done when the exhibition is confined to trios in separate coops, but only by the display of as large a number as can be placed in one enclosure; thus affording by the multiplication of individual birds, each of the same breed, an opportunity of studying the characteristics of each particular family. Prominent poultry breeders could readily supply the birds for such an interesting and instructive exhibit.

The temporary exhibition will commence on October 25th, 1876, and last till November 10th, a period of fifteen days. The Commission will erect shedding, and the birds will be exhibited in the same boxes or coops in which they were transported. For the purpose of preserving uniformity, these boxes will be made according to specifications furnished by the Bureau of Agriculture.

Exhibitors will be acquired to assume all responsibility of feeding, and general attendance on their birds.

Only such specimens will be received as are of pure breed, and even these must be highly meritorious.

Further information may be had by addressing the Chief of the Bureau of Agriculture, Internation Exhibition at Philadelphia.

The Farmer's Cause.

We shall endeavor to advance our cause, says the *Western Agriculturist*, by laboring to accomplish the following objects: To develop a better and higher manhood and womanhood among ourselves. To enhance the comfort and attraction of our homes and strengthen the attachment to our pursuits. To foster mutual understanding and co-operation. To maintain inviolate our laws, and emulate each other in labor to hasten the good time coming. To reduce our expenses, both individual and corporate. To buy less and produce more, in order to make our farms self-sustaining. To diversify our crops and crop no more than we can cultivate. To condense the weight of our exports, selling less on the bushel and more on the hoof and in the fleece. To systematize our work, and calculate intelligently on probabilities. To discountenance the credit system, the mortgage system, the fashion system, and every other system tending to prodigality and bankruptcy. We propose meeting together, talking together, working together, buying together, selling together, and in general acting together for our protection and advancement, as occasion may require. We shall avoid litigation as much as possible, by arbitration in the Grange. We shall constantly strive to secure entire harmony, good will, vital brotherhood among ourselves, and to make our Order perpetual. We shall earnestly endeavor to suppress personal, local, sectional and national prejudices, all unhealthy rivalry, all selfish ambition. Faithful adherence to these principles will insure our mental, moral, social, and material advancement.

Apiary.

Bee-Keeping in California.

Southern California is attracting the attention of all the apiarists in the United States. It is evidently the bee-keeper's paradise. We think that we can do no better for this department, this month, than to extract from some letters on bee-keeping in Southern California which we find in the *American Bee Journal*.

A gentleman who signs himself "Amateur" writes:

Time has wrought a good many changes since I last wrote you. My attention has been turned a good deal to other things for the last two or three years, so that I have not taken the interest in my bees that I should have done. But now I am thoroughly settled in my pet business on the far off Pacific Coast, and from this "land of honey," as well as "land of gold," I propose shaking hands again with my brethren, through the columns of our beloved *American Bee Journal*.

The glowing descriptions of this coast as a honey-producing country, induced me to leave home and friends in the beautiful Mississippi Valley and seek a home in the mountains of Southern California.

There is so much in this country of interest to bee-keepers that I hardly know where to begin. I will, however, begin at the beginning and tell something of the history of bees in this State.

The first bees brought to California was in March, 1853, by Mr. Shelton, who bought twelve hives at Aspinwall. These dwindled down to one before swarming season. This one threw off three swarms, two of these were sold in the fall, one at $105, the other at $110. The next lot were imported in 1855. But not until 1857 and 1858 were there many bees brought here. So that by 1860 there were several thousand colonies of bees in this State. In the year 1860 Mr. A. J. Biglow brought from the apiary of Mr. S. B. Parsons, of Flushing, L. I., 113 Italian queens, and arrived safely in Sacramento with 111 of them. So you see that the Italians had nearly an even start with the blacks here. Although it has been but a short time since the first introduction of this noble insect along this coast, yet for several years past the woods and eaves have been full of bees, and thousands of them have been taken by hunters every year. The Italian stock is mixed many wild bees. Notwithstanding this country is so well adapted to the culture of the honey bee, and this insect has done so well here, it has only been a few years since the real resource of the country, in this particular, has been known.

At first bees were kept on the valley lands, where they do well, but make an inferior article of honey. But the honey district is on the western slope of the mountains, and is comparatively a small district. There are, it is true, many places not yet occupied by apiarians and many others that never will be, owing to the want of water. My present location is in the Santiago Canyon, 30 miles S. E. of Anaheim—my P. O. The surroundings are beautiful, and we have 150 colonies of bees, from which we have taken up to the present date 3,000 lbs. of honey. We expect to take 30,000 lbs. and increase to 300 colonies this season.

The honey-producing plants here are almost innumerable, as every plant and shrub on the mountains has a bloom from which the bee gathers honey, some are in bloom the year round.

A swarm put into an empty hive in November will live through winter and probably swarm in May next.

The earliest plant is the *manrinata*, which blooms about Christmas and produces a great deal of honey. Then comes in the many varieties of *willow*—some for pollen and others for honey. From February 1st there are a succession of plants in bloom, giving the bees every opportunity for swarming by the middle of March. Through April they have ample time to become strong for gathering honey from sage and other varieties of bloom in May, June and July. The principal plant is *white sage*, which blooms about the middle of May, and continues in bloom about seven or eight weeks, and from which the best quality of honey on earth is produced. The white sage grows on the hottest and dryest portions of the mountains, and produces abundance of honey every year, whether it rains or not; the hotter and dryer the better. There has never been a failure known here in the bee business owing to the season.

About California.—W. J. Whitney, of San Bernardino, California, sends the same journal the following general directions about emigrating to this State, in answer to the following questions:

Don't think of shipping bees here from east of the Rocky Mountains, as it will be money and bees wasted. If you can get half what the hives cost there, you had better sell them than to ship them.

Now for your questions in regular order.

1. What can good stands of bees be bought for in your vicinity? A. From $4 to $12, according to condition, style of hive, etc. In Los Angeles, for $2 50 in Harbison hives, the honey they make there not being saleable, since San Diego honey came into market.

2. There are two mills dressing, cutting up, and putting together (if wanted), at the following prices:

Harbison's, ready for putting together, $1 80.

Langstroth's, ready for putting together, $1 70.

Watson's improved Langstroth for five section boxes, $1 90.

Louth's improved hive for section boxes, the best yet out for this country, $1 95.

Section boxes for surplus honey, 13 cents each.

Cases, 22 each to hold 4 section boxes, can be had in any quantity.

3. Plenty of work to be had during haying and harvest threshing, etc., at from $2 to $3 per day and board. We can raise any amount of broom corn or any other corn you wish to plant. I should think broom making could be made to pay here as they are worth from 40 cents to $1 each, according to quality. There has been no broom corn raised here for market yet, that I know of.

4. We think fruit raising and bee culture our "best hold" here. We raise apples, plums, peaches, apricots, quinces, figs, almonds, walnuts, oranges, lemons, blackberries and strawberries. Of grapes, we can beat the world. I have the White Muscat, Flaming, Tokay, Rose of Peru, Hamburg and Mission, or native California grapes. We also raise pumpkins, squashes, melons of all kinds, beets, beans, potatoes, sweet potatoes, and in fact, anything which will grow any where from the Equator to the Arctic Circle.

5. This country is good for men with much or little means.

6. Country new and inhabitants scattering, but coming in pretty fast. I am twelve miles from the coast; from the postoffice five miles; have no school now, but expect to have this summer in the new Grangers' hall, which I am now building near the postoffice.

7. Don't know of any improved land with buildings for sale; unimproved land from $2 to $10 per acre. Government land for the taking up.

8. The same land needs irrigating for summer crops, not for grain or grass. The bees make honey nearly all, or all, the year round.

9. Cost of clothing about 25 per cent. above eastern prices. Flour $5 50 to $6 50 per barrel. Beef 5 to 6 cents. Will not pay to ship anything but bedding and clothes.

10. Society good.

11. Climate healthiest in the world. No cholera that I ever heard of. Very few poisonous reptiles. Once in a while a rattle snake may appear. I have killed four or five in the yard since I have lived here.

12. Rough lumber, red wood and pine, at $26 per thousand feet. Common red wood planed on one side, $28 to $30. Rustic, $45. Matched pine flooring and ceiling, $35. Surfaced red wood, $40. Bee hive lumber, $30. Nails, $5 50 per keg 8ds. Doors, $2 50 to $4. Windows, $2 25 to $6.

13. Hauling can be done for $10 per thousand feet. Climate so mild that a very cheap house will answer. Never any snow and but little frost. Never cold enough to need a coat on, except at night and when it rains.

Best Bee Location, etc.—R. J. Colburn, Chicago, Ills., writes as follows:

Seeing inquiries in the June number by Mr. H. B. Rolfe, about California as a location for an apiary, I would say, that being desirous of locating an apiary I have, myself, been on the look out for a place for some time past, and I investigated California among the rest, and I have come to the conclusion that Southern California is probably the greatest honey producing country, of equal area, in the world. I am further satisfied that its distance from good markets and liabilities to the disease known as "foul brood," as well as from ravages from the moth, may reduce the high estimate some people have of it. Again, there is just now a rush among the Eastern bee-keepers to Southern California; so much so that Mr. Harbison told me—on his recent visit to the East, when he marketed his gigantic crop—that where a few years ago he had no competitors near him, they are now so plentiful that he can hardly find a place to locate any new apiaries. His custom being to keep say from one to two hundred colonies in a place, and as fast as they increase, locate new ones.

In regard to the quality of California honey it seems to be the opinion of every person who has tasted it, with whom I have talked, that it cannot compare with our white clover, except in looks, "Novice" to the contrary notwithstanding. But its looks sell it. Again, I am of the opinion that the present season will see a drop in the honey market, as there probably will be shipped from California three quarters of a million pounds, and this with glucose so cheap, will materially reduce the profits of bee-keeping for Eastern apiaries. Look out for it, brother bee-keepers.

Pay as You Go.

The credit system is always attended with serious consequences, but it never resulted in such wide-spread disaster as at the present threaten. The credit system must at all times provide in some way for inevitable losses, and it does it by compelling the consumer to pay extravagant prices for everything he purchases and levying the debts of the unfortunate and dishonest upon the thrifty and honest. An unfortunate result, also, of being able to buy on credit is a tendency to purchase much that we do not need, and more than we need of what is actually necessary. When a man pays for what he gets at the time he gets it, there is little danger of his getting more than is absolutely necessary, and there is still less danger of his getting anything for which he is in no need.

The idea of turning a portion of the waters of the Colorado river from their present bed and cause them to run upon the lands of the Colorado Desert so as to reclaim it from its present waste and worthless condition, is a part of the plan of survey upon which Lieut. Wheeler is at present engaged.

The Horse.

Horses for Farm Use.

HALF the secret of doing good work lies in having good tools to do it with. In like manner the team which a farmer works has as much as aught else to do with his success or failure in farming. Our modern methods of farm management lessen the use of horses on one side by employing steam wherever practicable; but they immensely increase it on the other side by substituting horse-labor for that of men. Improved mowers and reapers for securing the hay and grain crops; improved cultivators nearly superseding the use of the hoe in cultivated crops, are the order of the day. It is no wonder that farmers are beginning to take decided interest in the horse business—not always in trotters for the race-course, but especially in good, strong-limbed and fast-walkers for the plow, the cultivator, the rake and the reaper. The higher price farmers have to pay for hired help makes it doubly important that it should not be neutralized either by inferior implements or teams. With some horses, six to seven acres a day is all that can be reaped or mown; while with others, twelve to fifteen acres are just as easily accomplished. It is discouraging to a farmer, and equally so to his hired man, to work hard all day and accomplish little through the inefficiency of his team. Work soon gets behind hand, and it costs twice as much, often more, to do work three weeks too late as to do it at the proper time.

What kind of horses do farmers want? This subject is a broad one. Most attention has been paid to the trotting and racing breeds; but these evidently are not the horses for average farmers. What they want is a horse strong enough for any kind of farm work, of good constitution, easily kept, and one that will readily learn a fast walk for ordinary farm work. The old Monroe County Agricultural Society, now the Western New York, did a good thing years ago in offering premiums for fast walking horses. There is no excitement in these trials of walking speed, but we opine that such premiums do more for the farmer than what Josh Billings calls the "purely agricultural hoss trot."

In our judgment, the Percheron horse, or some other strain of the Norman French breeds, makes the best basis for breeding a hardy, active and always healthy farm horse. In some sections these French horses have attained considerable popularity under the name of "Samsons," sometimes called "English Samsons," though the basis of the breed is rarely English. Their peculiarities are short legs, sound feet and heavy bodies in proportion to their size. The English or Scotch "Clydesdale" breed is generally too large-bodied, and too "loguey" to cross on our native mares. Possibly better results would be secured by taking Clydesdale mares and breeding with some of the heavier classes of American trotters. Theoretically, this should give all the strength and body required, with sufficient action and speed for all practical purposes.

A team weighing 2,100 to 2,250 pounds, closely built and well kept, will do the bulk of work on a hundred acre farm, as we know by experience. If more team help is needed get some more horses as nearly like them as possible rather than strive to get horses of unnatural size and proportions.—*Rural New Yorker.*

Horse-Racing at the State Fairs.

Among the abuses to which the State of California has become accustomed, is that which devotes large amounts for the encouragement of horse-racing at the State's annual Agricultural fair. We have no objection, whatever, to any reasonable encouragement of the breeding of good horses. And that horse-racing is one of the ways of encouragement for the improvement of racing stock, there can be no doubt. But does the hope of winning the stakes materially aid in the cultivation and breeding of good stock, such as the great majority of the people use, or have need of? We doubt it. It is the race-horse and fast trotter for which the stakes are offered, and it is the horse-jockey for whose benefit you and I, reader, are taxed to make up the stakes which go into his pocket. When the State, through its Legislature, offers premiums, or racing stakes, it is simply made a party to the violation of its own laws against gambling; for horse-racing is just as much gambling as is the betting at faro, monte or any other gambling game. Call it what you will, it is gambling, nothing less. So that while the State passes laws inflicting heavy penalties for playing games of chance, which it calls gambling, it offers large sums for the encouragement of gambling in another form, in which the horse is used instead of the cards, and the jockey takes the place of the dealer.

Manipulate the question as you please, plead improvement of stock, and all the rest of the flams used as arguments, it amounts to this: the State offers rewards for breaking its own laws; it encourages horse-race gambling at the expense of all its taxpayers. The horse-race calls together the gamblers particularly. It encourages betting, gambling, turbulence, a desire to obtain money without having rendered any consideration for it; and the race-course and the stand become the gambling hell out-doors of the gambling fraternity. And you and I, and every man who pays taxes, is assessed that the horse-jockey may win our money.

While the State does this, it takes away from our citizens who give their money and a portion of their time to military affairs, the miserable pittance formerly allowed them in part liquidation of their necessary expenses for Armories and other indispensable needs. How much better would it be to divert the money thrown away, and worse than that, in the encouragement of horse-racing and horse-gambling, and bestow it upon our public-spirited men, who, in times of peace prepare themselves for war, in accord with the advice of Washington. In the one case the money put up for the jockey to win, as the gambler wins on the turn of a card. In the other it would be given to men making themselves competent to defend the country against a foreign foe, or domestic violence. Abolish the premium on horse-racing bestow it upon the military.—*Alta, June* 14.

Horned Cattle at the International Exhibition.

The Centennial Commission proposes to adopt a scale to regulate the respective numbers of each breed of neat or horned cattle to be entered for competition.

It is assumed at 700 head will cover all desirable entries; and upon that basis will be calculated the number of stalls which will be apportioned each breed.

The scale divides the aggregate number into ten parts, and of these, four-tenth (4-10) are assigned to Short-horns, two-tenths (2-10) to Channel Islands, one-tenth (1-10) to Devons, one-tenth, (1-10) to Holsteins, one-tenth (1-10) to Ayrshires, and one-tenth (1-10) to animals of other pure breeds.

The exhibition in each breed will comprehend animals of various ages, as well as of both sexes. Draft and fat cattle will be admitted irrespective of breed.

The exhibition of horned cattle will open September 20th, 1876, and continue fifteen days.

It is desirable that all persons who contemplate exhibiting, will make application for stalls without delay, and if necessary at a later day such applications can be amended.

Inquiries may be addressed to the Chief of the Bureau of Agriculture, International Exhibition, Philadelphia.

Pisciculture.

The Growth of Salmon.

A HISTORY of the growth of the salmon from the small ova or eggs, may be interesting in this place. Each adult female salmon lays from 800 to 1,000 eggs to every pound of her weight. In their healthy condition, the eggs are generally of a pinky or amber color, with opalescent hues, semi-transparent, and exceedingly pretty in their effect. Sometimes, however, the eggs are very pale—nearly white in color; others, again, are of a bright coral red; but all that have a peculiar transparent iridescent hue are unmistakably healthy eggs. A tough, horny membrane is the "shell" which holds the embryo salmon and preserves it from injury. This external shell is exceedingly elastic; an egg dropped on the floor will rebound like an India rubber ball.

For a month or so no change is apparent in the healthy egg, as it lies in its bed of gravel in the running stream where it has been deposited by the mother, with the temperature or the water at about 45 degrees. The eyes of the fish appear in forty or fifty days; these may be perceived as two small, black specks; and in another three or four days a faint red line is apparent, running round the interior of one side of the egg, and in the centre a small red globule appears. The "thin red line" represents the vertebræ of the fish, just forming; and the red globule is a minute quantity of oil, which is destined to be absorbed by the fish after it comes out of the shell.

Gradually the faint indications of life within the semi-transparent shell become more marked till, about twenty days after the first appearance of the eyes, the fish bursts its prison. It now presents a most ludicrous appearance, with the lower side of its slender transparent body affixed to an oval sac which it carries wherever it goes. The vital organs of the fish can be distinctly seen; the pulsations of the heart are easily perceptible; and the rapid vibrations of the gills show that it is, for the first time, breathing just as an adult fish breathes. The empty "shells," as they float about in the water, showing the rent by which the young fish breaks its prison bonds, now appear like little bits of an India rubber air-ball, or portions of the white membrane found inside the shell of a hen's egg.

The fry are now "all alive," and as active as fish can be. Some of them will be found with their tails turned upward in an impudent manner; others bear their bodies in a becomingly staid longitudinal position; while others are strangely deformed. These unfortunates are unable to swim in a straight line, and can only turn round and round as on a pivot in one spot, lying all the time on their side, instead of swimming upright, and falling helpless to the bottom as soon as they cease their efforts at locomotion. These cripples generally die; though some of them, no doubt, arrive at maturity, as is proved by the instances—rare, it is true—of deformed salmon, with the backbone bent and crooked in various ways.

But the most curious instances of mal-formation are the fishy "Siamese twins." A double-headed creature is of frequent occurrence in a family of baby salmon, but these enormities seldom survive more than three or four days, though instances have been met with of a longer term of existence being given to these "monsters."

For some time after birth, the young fish do not seem to grow very fast; they are exceedingly active, and, though burdened with the umbilical vesicle, they swim swiftly about, rushing for a few seconds, and suddenly falling again to the bottom of the stream; they are unable to rest without touching the bottom.

The young fry do not require any food for

some time to come. The contents of the sac they bear about with them serves as food for the first six weeks of the salmon's life. The poor little fish has no mother to nurse it, so nature has provided it with a commissariat of its own. This vesicle or sac contains an albuminous secretion similar to white of egg, and a small globule of oil, the whole of which is gradually absorbed into the system. After six weeks of this self-sustaining process have elapsed, the outer skin of the bag appears to diminish in size, as the body of the fish increases.—*Chamber's Journal.*

The subject of pisciculture continues to attract public attention, numerous reports having been made by the state bodies since our last in reference to the subject. Among these we may mention the report of the Canadian government for 1874, and those of New Hampshire, New York, Massachusetts, and Connecticut. Operations looking toward the multiplication of the fishes of the United States have already been commenced, the United States Commissioner having been engaged for a month past in the rivers of North Carolina, Virginia Maryland and the District of Columbia in hatching shad and in turning the fry into the waters, as also in shipping a portion to localities destitute of them. The States of Maryland, Delaware and New York are also engaged at the present time in a similar undertaking.

Mr. Livingston Stone expects to resume his labors in procuring the eggs of California salmon on the Upper Sacramento for transmission to Eastern waters, and proposes a scale of operations looking towards the acquisition of ten millions of these eggs. It is probable that some of these eggs will be shipped to Chili for the purpose of determining whether the salmon can be successfully reared in the streams of that country, many of which, heading in the Andes, discharge their waters into the ocean, apparently possessing all the necessary conditions to constitute admirable places of abode for salmon. The United States Commission has already offered to deliver a sufficient number of eggs, properly packed in San Francisco, provided that their further transmission and subsequent hatching out are performed at the expense of the government of Chili. The offer will probably be accepted.

Mr. Stone has also paid a visit to the Columbia river for the purpose of studying the salmon fisheries of that stream, and to select a hatching station, should any provision be subsequently made for multiplying these fish artificially, to meet any anticipated decrease in consequence of the extensive scale of capture adopted on the Columbia to supply the various canning establishments.

An international exhibition of objects connected with the fisheries and pisciculture was held in Paris in July of the present year. Reference has already been made to the expectation of a similar exhibition of American fisheries at the Philadelphia Centennial, for which the general government and several of the States are making special provision.

Measures have been taken by the United States Commissioner of Fish and Fisheries for introducing the carp into the United States, by sending Mr. Rudolph Hessel, an experienced cultivator of this fish, to Hungary for the purpose of securing the best varieties. Opinions differ very much as to the excellence of the carp as an article of food, although it is claimed by its advocates that it is only in Eastern Europe, and in localities not often visited by Americans, that the best pieces are to be found. In any event, however, the fish is a desirable addition to our resources, as it ranks with poultry in point of domestication, and can be cultivated with very little trouble in almost any kind of water, thriving best in those which are warm, and thus eminently adapted to the Southern United States, where trout can be reared. As living largely on vegetable food, too, it becomes unnecessary to feed it with meat, or, indeed, to make any special provision for its nurture.

The American grayling still continues to be a subject of attention among pisciculturists, Mr. Fred Mather having recently made a second visit to the Au Sable river, in Michigan, and obtained a large number of spawn and of young fish. The eggs are now being hatched out at Northville, Michigan, and at Mr. Mather's establishment at Honeoye Falls, New York. The fish itself is not of any special economical importance; but as being one of great beauty, and readily taking the fly, it can be appropriately introduced into waters that are cold enough to receive it, and thus add, at least, to the resources of the angler. —*Harper's Magazine for August.*

Transporting Live Fish.—The London *Field* of a late date contains diagrams of an apparatus in use by the German Fisheries Association for transporting fish on long journeys, which consists of a long cask mounted on wheels, the motion of which works an aerating bellows, so that manual labor is dispensed with. There are iron or wooden tappets attached to the spokes by an open fork, and secured by a cotter, and when the wheels revolve the tappets strike upon and set in motion a swinging lever, and connecting wire attached to the lever works the bellows. Should it be desired to work the aerating bellows at a quicker rate, without increasing the speed of the vehicle, this can be done by adding to the number of tappets. The bellows can be worked by hand in case the apparatus remains stationary for any length of time, and the barrel can be easily removed from the frame at any time. It is a useful contrivance.

The Flower Garden.

Irrigation for Lawns.

The *Boston Journal of Chemistry*, in an article on "Making and Protecting Lawns," speaking of the dry and hot weather in New England the present season, says: "Grass plats, newly laid out, at much expense, in May, are now nearly ruined, and lawns look brown and sombre," and declares "that in such a climate no one can give advice that will serve to guide in the perfect preservation of lawns." Now, California is a drier climate on an average than New England, and right here in San Jose we can show the finest lawns in the world. The way they are kept fresh and green is by daily showering with water through sprinklers attached to hose under strong pressure. Water is first raised into high tanks by wind-mills, or is taken from the city water pipes. Many of the sprinklers are very ornamental and resemble fountains, but are movable, and will throw the water in any direction desired. Another way is to lay troughs under ground, a few inches deep, at a distance of several feet apart, and keep filled with water under a pressure, which will saturate the soil from below the turf.

By irrigation lawns can be kept fresh in spite of drouth, and in no other way can it be done. The time will come when the agriculturists east of the Rocky Mountains will resort to irrigation as a general system. Then they will have less failures, and will vastly increase the capacity of their soils, and thus add largely to the staple productions of the country.

The Love and Culture of Flowers. Nothing is so pleasant and encouraging as success, and no success quite so satisfying as success in the culture of flowers. It is a pleasure with no compensating pain—one which purifies while it pleases. We gaze on the beautiful plants and brilliant flowers with a delicious commingling of admiration and love. They are the offspring of our forethought, taste and care—a new, mysterious and glorious creation. They grew—truly; but very like the stars and the rainbow. A few short weeks ago the brown, earthy beds were bare and lifeless; now they are peopled with the fairest and frailest of earth's children. We have created all this grace; moulded the earth, the sunshine and the rain into forms of matchless beauty, and crystalized the dew drops into gems of loveliness. There is no greater pleasure than this in all the earth, save that sweetest and noblest of pleasures, the fruit of good deeds.

There may be hard-hearted, selfish people who love flowers, we suppose, for there were bad angels in heaven, and very unreliable people in the first and best of all gardens; but it has never been our ill fortune to meet with one such—and if by accident we should discover a monstrosity of this kind, we would be more frightened than we were a long time ago at what we thought a ghost sitting on a cemetery gate.

To love flowers, however, because of their sweetness and beauty and companionship, and as the wonderful work of a Father's loving hand, is what we mean when we speak of the love of flowers. Many cultivate flowers from a desire to excel their neighbors, or as an evidence of their refinement and culture, who know nothing of the absorbing love that causes a man almost involuntarily to raise the hat and bow the head in presence of so much heaven-lent loveliness. This love of flowers is confined to no age or station; we see it in the prince and peasant; it is shown by the aged father, tottering near the grave, who seems almost to adore the fragrant flower in his buttonhole, and by the little ones, who, with childish glee, search the meadows for the dandelions of early spring. The love of flowers, we fancy, is most pure and absorbing with the young. The innocent and pure can love the pure flowers, we think, with an earnestness and devotion unknown to some of us that are older.—*Vick's Floral Guide.*

Remove the Flowers.—The *Garden* says: All lovers of flowers must remember that one blossom allowed to mature, or "go to seed," injures the plant more than a dozen buds. Cut your flowers, then, all of them, before they begin to fade. Adorn your room with them, put them on your table, send bouquets to your friends who have no flowers, or exchange favors with those who have. On bushes, not a seed should be allowed to mature.

Recent scientific investigations appear to establish the fact that guano is not, as has been hitherto believed, the deposits of myriads of sea birds, accumulating through ages; but is the result of an accumulation of fossil plants and animals, whose organic matter has been transformed into a nitrogeneous substance. This view is substantiated by the fact that the anchors of ships in the neighborhood of the guano islands often bring up guano from the bottom of the ocean.

It is better to be flush in the pocket than in the face.

Stock Breeder.

The Improvement in Our Domestic Animals.

No branch of farming offers a better field for enterprise and careful expenditure of a small amount of money than the improvement of our farm stock, by the introduction of a few pure-blooded males, and females too, if the treasury will only admit of the expense.

About five or six years ago the subject of Short-horn bulls was introduced at some of our club meetings, the result of which was the purchase of one bull and two bull calves from Mr. Philip Tabb, who had at that time some very fine stock in Howard county, Md. The next season we had reported the sale of ten calves, averaging forty pounds more than from the same cows by a scrub bull; this alone gave a gain of $3 each on the sale of calves from the ten cows—quite a good interest on the first cost of the bull, which was $100. With most farmers in this part of the State the temptation of selling their calves is too great to resist; they will generally sell for nearly enough at six weeks old, to buy a two-year old steer or heifer, at the stockyards of Baltimore or Georgetown—of course the buying must be done at the dull time, in the fall of the year. A few, like myself, have some old fogy notions, and will raise a few calves, and lambs, too, even if they are worth more at six weeks than they will bring at one year old. Several other parties have since bought some thoroughbred bulls, of the Short-horn and Alderney breeds; from this small beginning we can now show more than two hundred young half-bloods of various ages. This will in a few years add very much to the value of our old native stock, both for beef and butter—all from a very small outlay of money for the first purchase of the thoroughbred males. Very many of our small farmers do not feel as if they could spare the necessary amount of money to make the first purchase. For such I would recommend that four or five living near should raise the necessary amount, by equal subscriptions, which would make the first cost seem much less, and all could derive the same benefit as by individual ownership. Or, what I consider much the best plan, is for one to own the animal and keep it at all times in the stable at his place, so that his neighbors will be sure to find him when needed, and charge them a reasonable price for service—say $1 or $1 50. At such a moderate price all will see that it is to their advantage to use a thoroughbred bull, as all his calves will be worth much more, either for the butcher or to raise; they will also be saved the annoyance of an unruly bull at all times on the place (except when he has jumped into a neighbor's corn field, or some other forbidden place). My own bull (a Short-horn) is kept up all the time, or nearly so, does not eat a peck of grain in a year, is in fine, thrifty condition on fodder, straw and other coarse food, with occasionally a little hay. By the above plan I get well paid for my investment and trouble of keeping the bull up, and my neighbors show that they are satisfied, as "sedge bulls" are a scarce article. I also have the satisfaction of seeing some good stock at home, and something to take a few prizes at the county fair, too.

I would recommend very much the same plan with hogs. One male will answer for several farmers; but be sure that he is a thoroughbred, of whatever breed you decide is best suited to your wants, and then do not rest satisfied with one pure crop, but continue to buy a pure blood to cross on the grade sows, so that the stock will be improving all the time. —*T. J. L., in American Farmer.*

Inflammatory Fever in Cattle.—To an inquiry from a correspondent about this disease the *Tribune* replies:

When young stock, especially calves, are subjected to a sudden change of feed, and from comparatively poor or rich sustenance, are put upon that of an entirely different character, the blood is at once affected. This altered condition is shown by fever, inflammation of the mucous membranes, especially about the eyes and the interior of the nose and nostrils, and a running from all of these. This frequently changes to stiffness of the limbs, with lameness and swelling. Afterward death is usually very sudden. The complaint is a blood disease, known as quarterill, blackquarter, inflammatory fever, anthrax, etc. It is seldom cured, but may be prevented. Caution should be exercised in changing feed. Cold, damp and excessive warmth should alike be avoided. Upon the appearance of the first symptom of disorder, a dose of salts (of six to eight ounces) should be given, followed by half an ounce of hyposulphite of soda, twice daily for a few days, administered in the feed or dissolved in water. A little linseed oil-cake meal should also be supplied each day. The disease may be communicated by means of a discharge from the nose.

Short-Horn Cattle.—In an interview with Mr. Wm. Curtis, a noted Short-horn breeder of Michigan, the inqury was propounded to him, Why is it you prefer the Short-horn, Mr. Curtis, to any other breed of cattle?

Well, sir, he said, I can very soon answer that question. Because there is more profit in them; there is more of them, you can get more out of them. The calves and young stock bring more money; they take on flesh faster. The cows give rich milk and the butter is rich. I know this, for I have tried Short-horns for years. They have no superior for beef. They make good working cattle. They combine more good qualities than any other breed. They cannot be improved by crossing with any other breed. Cross a Short-horn cow with a Devon or Ayrshire or Jersey bull, and you lose size. But the Short-horn improves everything it touches. It is the best known breed for improving native stock, and for this purpose alone they are valuable. They are kind and gentle, easily handled, good breeders and good mothers, hearty feeders, and I prefer them to any other breed. But I make no war on any other breed. They all have their good points, but the Short-horns, in my opinion, have the most best points.

Keep the Best Calves.—It is a common practice among our farmers to sell their best calves, and keep the poorest. This is not the true way, and they are reaping the disadvantages from so short sighted a policy. This selling to the butchers all the calves that fatten the quickest, and look the smoothest, is what has reduced the quality of the stock in this country.

Influence of the Male in Breeding. The Kentucky *Live Stock Record* gives its opinion on this topic as follows:

To improve the breed the question arises, whether the male or female plays the greater part in the proposed elevation of the herd. If a breeder wishes to perpetuate and impress the good qualities, and remove the defects of his breed, he must exercise the greatest care in the selection of the male and female. A single mis take in the selection of a bull will stamp qualities on his herd that will take years to eradicate. We believe the same rules that hold good in horses, hold with increased power in cattle. Although we believe the sire plays the most important part, and has more influence on the produce, the purity and good qualities of the dam are at least of equal consideration as the sire.

In reference to breeding horses, Gen. Daumas, a French officer, addressed himself to the Emir Abdel Kader. This was his reply: "The nobility of the father is most important. The Arabs greatly prefer the product of a blood horse and a common mare, to that of a blood mare and a common stallion. They consider the mother as having almost no influence upon the qualities of her produce. She is, they say, a vase which receives a deposit, and which retains it without changing its nature. Nevertheless, if race allies itself with race, there is not a doubt that the produce is good."

It won't do to depend solely on sires to improve the future condition of our horses or cattle; the mares and cows must be good also. We do not here speak of show cattle, running and trotting horses merely, but taking a more extended v[iew] of the subject, looking to th[e] tional advantage which the co[un]try derive from the improvement c[attle] of cattle and horses for general

It will be found in breeding cattle, horses, sheep or hogs, that the males parent chiefly governs the production of external character and structures, and very naturally the contour and action of the offspring, provided the male be of a superior or equally pure blood with the female; if not, the result will be uncertain.

From our observation in the human family, we have found, as a general rule, that the male children generally resembled their mother in the frontal and intellectual processes of the head, while the posterior portions partook of the father's characteristics. In the female child it is generally opposite, the upper and frontal processes resemble the father, the posterior the mother. It is crossing between animals evidently different in symmetry, proportions, characteristics and constitution, that has led so many breeders into difficulties and failures. But that differs greatly from crossing animals of homogeneons qualities. The best results have been experienced from that practice, when the object has been to influence the progeny of the female by the influence of a male of greater excellence.

In proof that the male parent governs the external form and character of the produce, we have only to look at the cross between the jack and the mare, and between the horse and jennet. In the first case the produce resembles the jack most, in the latter, the horse.

To milk a kicking cow stand off about eight feet and yell, "So, you darned skinflint."

Not Remarkable.—A Massachusetts farmer says: "My cattle will follow me until I leave the lot, and on the way up to the barn-yard in the evening stop and call for a lock of hay." Smithson says there is nothing at all remarkable in that. He went into a barn-yard in the country one day last week, where he had not the slightest acquaintance with the cattle, and the old bull not only followed him until he left the lot, but took the gate off the hinges, and raced with him to the house in the most familiar manner possible. Smithson says he has no doubt that the old fellow would have called for something if he had waited a little while, but he didn't want to keep the folks waiting for dinner, so he hung one tail of his coat and a piece of his pants on the bull's horns and went into the house.

Bunches in the Backs of Cattle.—A correspondent of the *Maine Farmer* says: Bunches in the backs of cattle are caused by the bot, or gad-fly, *œstrus bovis*. They may be peevented by procuring three ounces of pure carbolic acid, which can be obtained at any apothecary's, and diluting with one gallon of water; shake well, and place in a jug, keeping it closely stopped, and apply daily with a swab to the backs and sides of the young stock. Apply after the first of July, as it is about that time that the gad-fly appears.

In stock breeding no real advances have ever been made except by in-and-in breeding. The famous Vermont Merino sheep were produced in that way, and it is said that all the successful breeders of sheep in Australia have pursued the same course, and with the best results. While those imbued with the idea that stock deteriorated under close breeding and have spent much money to prevent it, have almost without exception ruined their flocks. No strain can become fixed except by close breeding.

"Too Poor to Take a Paper."

Moore, of the *Rural New Yorker*, was sitting in his office one afternoon some years ago, when a farmer friend came in and said:

"Mr. Moore, I like your paper, but times are so hard I cannot pay for it."

"Is that so, friend Jones? I'm very sorry to hear that you are so poor; if you are so hard run I will give you my paper."

"O, no, I can't take it as a gift."

"Well, then, let's see how we can fix it. You raise chickens, I believe?"

"Yes, a few; but they don't bring anything hardly."

"Don't they? Neither does my paper cost anything, hardly. Now, I have a proposition to make to you. I will continue your paper, and when you go home you may select from your lot one chicken and call her mine. Take good care of her and bring me the proceeds, whether in eggs or chickens, and we will call it square."

"All right, brother Moore," and the fellow chuckled at what he thought a capital bargain. He kept the contract strictly, and at the end of the year found that he had paid about four prices for his paper. He often tells the joke himself, and he never has had the face to say he was too poor to take a paper since that day.

The question of revenue must never stand in the way of needed reform.

Poultry Yard.

How to Keep Poultry.

A CORRESPONDENT, who, by long experience and continued success, knows whereof he speaks, sends the *Rural Press* the following on this subject:

The health of our chickens has always been in accordance with the house we gave them. Roup, pip, and other diseases have frequently put in an appearance, but by giving them plenty of vegetable diet and sulphur, they soon disappeared. Were the houses and yards are kept free from dirt and filth, there has never been any material loss; hence, this is the most important consideration. We make the houses tight up to within three feet of the eaves, and the balance is slatted. Roosting poles are placed from three to four feet apart, equal distance from the ground, so there will be no soiling of each other's feathers. The walls, outside and in, are whitewashed twice a year. Roosting poles and nest boxes are scrubbed with lye frequently, to destroy insects. If this is not found sufficient, fumigation with sulphur and tobacco is resorted to, which is certain death to all lurking insects and vermin.

A very important item is clear water, and an abundance of it. If a running stream can be provided, so much the better. The next thing is to provide a good wallowing place, and for this there is nothing better than dust gathered up in the road. Never keep more than fifty fowls in one enclosure. Give an occasional feed of meat. There is money in the poultry business, but not without labor and attention.

Lice on Fowls.—There are such a number of recipes for killing lice on hens that it is difficult to determine which is best. We use only one thing, and that is sulphur, and in the following manner: Whenever a hen takes a nest for sitting, fresh, clean hay is put under the eggs, and one tablespoonful of sulphur scattered over it. This will sift in among the hay, and the warmth of the hen will be just sufficient to cause slight fumes to arise and kill all the vermin which may be on the hen or in the nest. We have practiced this plan for the past twelve years, and neither a lousy chicken nor mother has ever been seen in our yard during the time named.

This is our preventive for lice on young chickens. Every spring we have our poultry house and roosts thoroughly cleaned and whitewashed inside, and then scatter flour of sulphur in every crack and corner and liberally over the floor. Do this and repeat it in the autumn, and we will venture to say that you will have no vermin on your fowls.

To kill the lice on the old fowls immediately, mix a little sulphur in lard and grease their heads with the compound, and put a little under each wing.

Sulphur is death to all kinds of lice, and not at all injurious to higher animals.

If scattered plentifully about barns and other out-buildings, it will destroy many kinds of vermin besides hen lice. We have had no "pip" among our chickens since we commenced the sulphur treatment.—*Rural New Yorker*.

A Model Hen Farm.—Of a hen farm near Marietta, Ga., the Atlanta *Herald* says: Laubere keeps his fowls in flocks of fifty. With these fifty hens are four cocks. To each flock of fifty he gives one acre of grain; i. e., he allows them the run of one-half acre this year and the other half next year, cultivating the unoccupied half acre every year. The farm, with its 800 occupants, occupies sixteen acres. Half of this is all the time under cultivation, so that only eight acres are really detracted from agricultural purposes. The farm lies pretty level, and is a beautiful sight; its regular succession of fences, its alternation of cultivated spots, its scores of shade and fruit trees, its hundreds of crowing cocks and clucking, matronly hens, make a picture worth going to see.

There is an egg on exhibition at Goggings drug store, opposite the plaza, that defies the genus of the hen kingdom, and completely sets at naught all former efforts of the genus hen to produce odities in their line. This egg has a moveable lid at its apex, one-half inch in diameter, leaving an opening in the shell of the same dimensions, from which its contents was pourred. The egg itself measures six and a half by seven and a half, and is the effort of a young Black Spanish fowl.—*S. V. Ag.*

Brahma vs. Black Spanish Hens.—A correspondent of the *Country Gentlman:* I have had as much experience with Brahmas and Spanish as any other variety, and I am confident that I can keep twenty Brahmas one year in good flesh with the same quantity of food that is required for twenty Spanish. Brahma chicks will attain a weight of six pounds each in the same length of time that a Spanish chick will attain four pounds. I can get as great a number of eggs in a year from ten Brahmas as I can from ten Spanish.

Porcine.

Breeding Better Pigs.

WE are glad to have a question from "a working man," as to how, without going into new-fangled breeds, he can make the best of his pigstyes, because, while the sneer at "new-fangled breeds" is a mistake, we hope wherever an interest in such things is felt, to be able to do some good in helping our readers to make more money out of what they keep, without the great expense many of them are so afraid of. And much may be done by any working man in pig breeding, if he will only use common sense.

Suppose, then, your present breeding sow is in pig—if she is not, you will of course put her to the best boar you can get—but we take her as she is, and her litter as it is, or is to be by-and-bye. The first thing you have to do is to watch that litter, especially the females. You will find a difference; some are more good-natured than the rest, and get on better on that account; all seems to come kindly to them. There will also be a difference in form, one carrying more flesh than another and of finer quality—not on account of a long, flabby belly, but because she is broad in the back and loins, has more barrel for her head and legs and so on. It is not rare to see one or two of a litter clearly ahead of the others. Now this good humor, this ample barrel, this greater quantity of good pork to offal, mark out such as your stock sows for the

future. Do your best with them, feed them well, and don't breed them till they are quite mature.

Before that time comes, find out who has the best breed in your neighborhood, not too unlike your own in size. Never mind the name, but find the man whose pigs grow fast, and fatten well and whose pork is best liked; he's the man we mean. Having found him, get if possible the use of his boar, either as a favor or for a moderate fee, if you possibly can. Don't mind so much about the fee; it will be the cheapest outlay you ever made, for we are not speaking of celebrated prize-winning strains (unless offshoots from them), but of good, well-bred, real quality animals that can be found within a moderate distance, and for a very moderate fee, almost anywhere. That one cross alone on your own best sows, will do a world of good.

But further, when you have selected the best of the offspring from this cross, use for them, if you can, another boar of the same sort. It is bad to go from one to another; whereas, by putting your own twice running to the same class of boar, from a good breeder you get better and better; and in this way, at almost no expense, you will ere long have got a much better class of occupants for your styes.

The rule is very simple; study to find out your own best, and keep on crossing them with the best you can get, always crossing from the same sort if possible, though it costs you trouble to find the boar you want. Only keep on twice to this plan, and you will find it pays so much better you will be sure to go right on of your own accord. The only objection is, if you keep on long enough, you will find you have got before you know it into one of the "new-fangled breeds." But you won't mind it by then. —*Live Stock Journal and Fancier's Gazette.*

The Berkshire Swine Record.—We learn that the American Berkshire Swine Association is meeting with hearty encouragement from many of the prominent breeders of the United States and Canada, among whom may be mentioned, as an indication of the wide-spread interest which the Berkshire Swine Record has already awakened, Messrs. T. S. Cooper of Pa., C. S. Taylor of New Jersey, John Snell Sons of Canada, H. M. Cryer of Ohio, and Theodore Eads of Iowa.

These and many others have expressed themselves thoroughly in sympathy with the work, and the very liberal support with which it is favored on every hand, encouraged the executive committee to believe they will be able to close the 1st valume by the 1st of August.

From a recent interview with Hon. A. M. Garland the Secretary of the Association, we learn that it has been decided to offer a premium of $100, for the best approved essay on the history of the Berkshire hog. In order also to call forth if possible, and to have permanently on record everything of importance that is known regarding the ancestry of such animals as are registered, it is proposed to allow to each patron, in the first volume, space not to exceed one page—at the mere cost of printing, for the purpose of giving a complete and detailed statement of all facts throwing light upon the past history of his stock.

It is evident the Association is determined to go to bed-rock for a foundation on which to build. The structure is not to be erected on uncertain sands. The establishment of a reliable herd-book for Berkshire swine has long been desired, but the element of reliability has always been deemed of such vast importance, and withal so difficult of attainment, that the task of founding such a work has heretofore never been undertaken. The almost universal response of encouragement from far and from near, throughout the country, shows that the day has come when such a work cannot longer be delayed. The very thorough manner in which the managers of the present enterprise are doing business, and the excellent plan for registers which has been matured, cannot fail to bring success, and to please all reliable breeders who want an authentic record. The decisive rejection of spurious pedigrees will make this already valuable and popular breed of swine more highly prized than heretofore, and will greatly assist farmers and stock-men in selecting animals best suited for the improvement of such stock as they already have.—*Prairie Farmer.*

Hog Cholera—Enteric Fever.—The period of incubation is from seven to fourteen days, but is less in a hot climate. Causes: Contagion, privation, starvation, confinement, filth, etc.

Symptoms: General ill health, shivering, fever, great dullness, prostrative fever, hides under litter, lies on belly, weakness of hind limbs, and later of the fore limbs, rapid, weak pulse, dry snout, covered by blood-stained spots, which also cover the skin, eyes, etc., often a hard cough, little or no appetite, intense thirst, tender abdomen. After death, blood staining infiltrations into lungs and bowels, ulcers on bowels.

Treatment: Give cooling, acid drinks, buttermilk, sulphuric acid, etc.; feed soft, mucilaginous food, such as oil cake. Administer twenty drops of perchloride of iron twice a day. Blister the abdomen by means of mustard and turpentine; stimulate if very prostrate.

Prevention: Avoid all debilitating conditions, poor or spoiled food; keep animals constantly thriving. Feed charcoal or ashes, also tar or carbolic acid. Avoid contact with disease. Burn infested pigperies and remove to a new place.—*Prof. James Law.*

Hygienic.

Does the Use of Flour Promote Decay of Teeth?

BY EPHRAIM CUTTER, M. D.

THERE is no doubt that the decay of teeth prevails to an alarming extent, and it is very humiliating to our modern civilization to have it characterized so generally by the occurrence of diseased teeth. The ætiology of this disease is a great, broad, and deep subject. No doubt many elements combine together to cause it; and the person who should positively announce a single agent would be dismissed as unworthy of attention. Still it is a matter worth discussing, and deserving the attention of the ablest minds. To ignore is not to arrest; hence we offer a few suggestions for consideration.

"The *Chemical News* ascribes the potato rot to a deficiency of lime and magnesia in the soil. Different observers state the percentage of magnesia in the ash of sound tubers at from five to ten per cent.; in the diseased tubers an analysis shows only 3.94 per cent. Analysis of sound tubers shows over five per cent. of lime, but in the ash of diseased tubers only 1.77 per cent. was found. A similar observation was made some years ago by Professor Thorpe, with regard to diseased and healthy orange trees; in the former there was a deficiency of lime and magnesia."

According to these authorities, a deficiency of mineral salts in the vegetations named is supposed to be a sufficient cause for decay. Now, it is an interesting question whether there is any article of food employed by mankind which is deficient in mineral matter. If so, then it should be made known to every family in the land.

Perhaps there is no article of food more generally consumed than flour, that is, wheat flour. In the forms of bread, cakes, and pastry of all kinds, it enters into every house, and is universally used and regarded as the "staff of life."

Does flour possess a requisite amount of mineral matter?

To answer this question, Mr. Sharples, the well-known chemist, analyzed for me the "Peerless Flour." He found .55 per cent. of mineral ash, a little over half of one per cent. He stated also that the proportion of ash in the whole grain varied from 1.65 to 2.50 per cent. So that the diminution of mineral food varies from two-thirds to four-fifths. In other words, by the use of flour, mankind loses from two-thirds to four-fifths of the elements that go to make up teeth and bony structures. This statement deserves to be written in letters of gold over the door of every bakery and kitchen in the land.

Flour has been used for generations, and if we can rely upon Mr. Sharples' statement, mankind has all this while been deprived of the greater moiety of the mineral food that the Almighty intended it should have the benefit of. Is it not natural to expect that the bony structures should suffer from this great withdrawal? For it is a *great* withdrawal. Suppose that a water supply pipe should be cut off two-thirds to four-fifths, would not the supply be greatly diminished? Cut off the same quantity of time from the hours of daylight; and would not our darkness be great? Take away two-thirds to four-fifths of our muscular food; would not a strong man become very weak? Cut off air to the same extent; would we not lose our breath? And why should the bony tissues not suffer in like manner when their food is withdrawn? I think they do. Perhaps a little evidence in the contrary direction may throw light upon this.

A dentist, whose name is well known, said that he filled some fourteen cavities in the teeth of his first-born child by the time he was four years of age. He put his family upon the use of the whole grains, and the next child had no retarded dentition, and not a decayed tooth up to the same age!

The same gentleman says that the teeth which decay are not compacted or knit together with the firmness of healthy teeth. There seems to be an arrest of perfect development. Though what can be more natural than to expect imperfect development and decay, when from two-thirds to four-fifths of the proper bone food is habitually withdrawn from an article of diet which is more largely used than any other?

How common it is to see infants not cutting any teeth at all, until they are twice as old as they ought to be. The good effect of the whole grain diet is shown in Dr. Harriman's second child, above alluded to. To be sure, it is only *one* case, and must not be made too much of.

Now what is to be done about it? Certainly one man's dicta amount to but very little alone. What we need is evidence from others. Suppose that every medical association of the country take up this matter, have analyses of flour made, try feeding mothers and children upon the whole grains of wheat meal, oat meal, corn meal, beans, etc., and suppose they all come to the same conclusion as the writer has done. Suppose they officially announce the result. Would it be long before the general public would heed the truth, and thousands of persons would rejoice in the

possession of that priceless treasure, a set of perfect teeth?

Note: Through the kindness of Mr. E. H. Davis, Superintendent of Public Schools in Woburn, Mass., the writer has been furnished with the following astounding statistics, embracing returns from several of the largest primary schools of Woburn, a fair representation of the prevalence of diseased teeth among children:

	No. Scholars.	With Sound Teeth.	Decayed.
Lawrence Primary.....	113	14	100
Plympton St. Primary.	94	27	67
Hiniand St. Primary...	71	25	46

What Smoking Does for the Boys.—A certain doctor, struck with the large number of boys under fifteen years of age whom he observed smoking, was led to inquire into the effect the habit had upon the general health. He took for his purpose thirty-eight boys, age from nine to fifteen, and carefully examined them. In twenty seven of them he discovered injurious traces of the habit. In twenty two there were various disorders of the circulation and digestion, palpitation of the heart, and a more or less marked taste for strong drink. In twelve there was frequent bleeding of the nose, ten had disturbed sleep, twelve had slight ulceration of the mucous membrane of the mouth, which disappeared on ceasing from the use of tobacco for some days. The doctor treated them all for weakness, but with little effect until the smoking was discontinued, when health and strength was soon restored. These facts are given on the authority of the *British Medical Journal.*

Spectacles become necessary when you first notice yourself going to the window instinctively for a better light, or when your eye gets tired by looking at any small thing near at hand, or a dimness or patering is manifested, so as to cause indistinctness. First purchase No. 20, and as you observe the symptoms above named, get No. 18, and so on. Glasses should be near enough to the eye almost to touch the lashes; they should be washed every morning in cold water, and carried in a pocket by themselves. Brazilian pebble makes the best lenses. Avoid reading before sunrise and after sunset. Read as little as possible before breakfast or by artificial light; do not sew on dark material at night, and use no other eye-wash than pure, tepid, soft water. Babies' eyes are often injured by allowing the glaring sunlight to fall upon them.

Cure for a Felon.—As soon as discoversd, take some spirits of turpentine in a cup, dip the finger in it, and then hold the hand near a hot fire till dry; then dip it in again, and repeat for fifteen minutes, or till the pain ceases. The next day, with a sharp knife, pare off the skin, and you will find something like a honey comb filled with clear water, open the cell and the felon is gone. If the felon is too far gone for turpentine, oil of origanum, treated in the same way will cure. If too far advanced for either to cure, the felon will be benefitted, as it will be less painful. Never draw it.

Burns and Freezes.—Whatever is good for one is just as good for the other. Cold water or snow will remove the first fire or cold, then essence of peppermint, or a strong solution of alum water will harden the skin and draw out the pain. Great care should be taken with burns or freezes, not to break or rack up the skin; and never put on drawing poultices, it makes a big sore. A cloth with a little mutton tallow or some soft oil spread upon it, will keep out the air and heal it where the skin is torn up.

Abstinence from low pleasures is the only means of meriting or of obtaining the higher. Kindness in ourselves is the honey that blinds the sting of unkindness in others.

Educational.

"What Shall We Do With Our Daughters?"

MRS. LIVERMORE has made this query the text of one of her fine lectures. It is certainly an important problem, but the Davenport *Democrat* thus sums up some sensible lessons which should early be impressed upon them:

Teach them self-reliance.
Teach them to make bread.
Teach them to make shirts.
Teach them to foot up store bills.
Teach them not to wear false hair.
Teach them to wear thick, warm shoes.
Bring them up in the way they should go.
Teach them how to wash and iron clothes.
Teach them how to make their own dresses.
Teach them how to cook a good meal of victuals.
Teach them that a dollar is only a hundred cents.
Teach them how to darn stockings and sew on buttons.
Teach them everyday, dry, hard, practical common sense.
Teach them to say No, and mean it; or Yes, and stick to it.
Teach them to wear calico dresses and do it like queens.
Give them a good, substantial, common school education.
Teach them that a good, rosy romp is worth fifty consumptives.
Teach them to regard the morals and not the money of their beaux.
Teach them all the mysteries of the kitchen, the dining-room, and the parlor.
Teach them that the more one lives within his income the more he will save.
Teach them to have nothing to do with intemperate and dissolute young men.
Teach them that the farther one lives beyond his income the nearer he gets to the poor-house.
Rely upon it that upon your teaching depends in a great measure the weal or woe of their after life.
Teach them the accomplishments, music, painting, drawing, if you have time and money to do it with.
Teach them that a good, steady mechanic, without a cent, is worth a dozen oil-patent loafers in broad-cloth.
Teach them that God made them in His own image, and no amount of tight lacing will improve the model.

Begin Right.

It matters little what the employment is upon which you are about to enter, whether we go into the offie, the workshop or upon the farm, it will be well for us to remember that as we commence the work to be accomplished, so will we be likely to carry it through to the end. The bookkeeper who goes into the office to work for a year, and allows himself to be careless and his accounts to become confused, will never recover. At the end of the year, when customers come in to settle and compare accounts, the negligent accountant will learn that many little items left over just for the present were never recorded, and the dissatisfaction arising from such negligence is likely to cost him his position in the office, which must be filled by a man who has learned to perform the work assigned him carefully and promptly.

Upon a farm, most especially, the work is varied, and the time at which many of the tasks should be performed so arbitrary that, if we court success at all, we must learn to do everything at the right time. This cannot be done if we go on in a sort of haphazard way, making no plans to-day for the work of to-morrow, but we must have our course carefully mapped out. There are farmers all over the country who cannot to tell where they will plow—what or where they will plant or sow. They only know that they will turn over a piece of sod somewhere for corn, put in a little patch of potatoes some other place, and sow a few oats if they conclude where to put them. Is it any wonder that such men are always in a hurry, always behind with their work, always put their crops in late, complain that it is a backward season and that their corn was cut by the frost before it was ripe, and that their potatoes are rotting for want of time to dig them? Are there not good and sufficient reasons why the wind throws down their unstaked fences, that their stock is unruly and always doing damage, that their orchards bear none but unmarketable fruit, that their meadows yield nothing but wild grass for want of draining, and that the roofs of farm buildings are always leaking? Is it a problem difficult to solve why their mowing machines are continually breaking down, their harness giving out, and cattle, sheep and horses dying of disease? It is all because this class of farmers allow their work to drive them. They lay no plans. and do everything a little too late. They are forever "dragging the cat by the tail." Such men ought to be compelled to work for a year or two under a careful, methodical farmer, and made to know what it is to accomplish a great deal and to do it easy and well. As an illustration of the success (or failure rather) of those men who are negligent in the important details of farm work, I will mention one instance which has just been brought to my notice. A farmer residing in a county adjoining that in which I live, having read one of my letters concerning root crops, determined to follow the advice given, and put in one acre of carrots. After having drilled in the seed he left the crop to itself until the weeds had become so thick that he could not find the little plants upon which he had, at their first appearance, built visionary supplies of yellow roots. But not completely discouraged by the first failure, he plowed the ground again and put in turnips. But negligence again stepped in and robbed him of the reward of his labors. Weeds were again allowed to get the advantage, and as a last resort he sowed Hungarian grass, which, being put in late, was killed by the drouth, and thus ended his first experience in raising root crops. Had he laid his plans the year before, and plowed and harrowed the ground for roots repeatedly, making the weeds grow and then killing them, he would have been able to report a far different result.—*C. T. Leonard, Ohio Farmer.*

Science on the Farm.

What has science to do with farming? Probably nothing, probably much. With what does he deal? Soils, grasses, vegetables, cereals, life, animal and vegetable, manures, etc. What do these require? Intelligence, a knowledge of their merits, their conditions, adaptabilities, the laws which govern them, and their constituent elements. As science is only knowledge reduced to practice, is it not required on the farm? The structure of plants is in itself a beautiful and useful study, and one that should be well understood by each person who deals with them, and their constituent elements and the food necessary for their growth and highest perfection. In order to obtain the best results from land it is

a requisite that we know what it will produce in the greatest quantity and perfection at the least cost. Some lands are best adapted to grazing, others require to be tilled and planted; hence, a knowledge of soils becomes necessary. The different vegetables require different foods, different climates and different soils; they feed on different elements, and what will make one species thrifty will not bring another to perfection, and these differences must be considered and met in order to insure success. Animals, in order to be bred properly, must be watched and cared for in accord with the laws of their nature, and those laws must be known and understoon, to be successful. No ignorant man or quack can successfully handle the principles of life and being. If we wish to apply manure we must know when, how, at what time and place, and its constituents. Of course, most plants will derive some good from any manure, but to apply it successfully, that is, understandingly, insures against waste. What can we cultivate with most profit to ourselves, is the great question, and the other is like it, How can we cultivate most economically?

There are those who shudder at the word science, as they suppose it means technicalities and a list of terms, but it is not so. Observation, reading and experimenting can make a man practically scientific, even if he disowns the name, and it is this science I would plead. Go into the world with eyes and ears open, and senses awake. Study to learn and learn to excel. All knowledge of material things aids the farmer. Many will not inquire for fear they may be misled, but good common sense is the stomach to digest all information, and it is not a requisite of success to swallow all that comes within reach like an unfledged robin. Reason must be brought to bear on the laborers of the farm as well as on any other calling of life. Prize all things, but learn to do what you try in a methodical and intelligent manner.—*F. G. McCauley.*

Facts From Farmers Wanted.

The importance of having practical writers for an agricultural paper, men who write from experience and not mere theories, cannot be over-estimated. In the struggle which usually attends the farmer's life, he too often forgets the great good he could confer by communicating more or less of his experience, including many years of close observation, to the columns of the leading agricultural journals published in the section of country in which he resides. This would be much more satisfactory to all concerned, than to be constantly complaining that the writers for agricultural papers are not, as a general thing, practical farmers.

Such men forget that our present knowledge is the sum of our own experience and the recorded facts based on the experience of others. They forget that it is to the thinking men as well as the working men, that we are, in the main, under obligations for the progress of agriculture. It is not only to practical farmers, but to men of scientific attainments, as Liebig, Johnston and others, that progressive farmers are under lasting obligations.

It will not do to set up the claim that success depends upon brute force alone, or that no agricultural paper possesses a cost value in timely hints or as a record of experiments, because, forsooth, its pages are not wholly made up of the writings of successful farmers, who are so engrossed with their duties on the farm that they never take the time to express their view on paper.

We are prepared to admit that every farmer must be governed more or less by the results of his own experience, or, in other words, he must be a law unto himself; yet it does not follow that he can derive no benefit from the experience of others whose farms are unlike that of his own in many respects.

Subscribe for the Agriculturist.

The Best Education.—Edward Everett, the gifted orator, never spoke more truthfully than when uttering the following words: "To read the English language well, to write with dispatch a neat, legible hand, and to be master of the first four rules of arithmetic, so as to dispose of at once, with accuracy, every question that comes up in practice—I call this a good education. And if you add the ability to write pure grammatical English, I regard it as an excellent education. These are the tools. You can do much with them, but you are helpless without them. They are the foundation; and unless you begin with these, all your flashy attainments, a little geology, and all other ologies and osophies, are ostentations rubbish."

It is too generally the custom among the schools of to-day to neglect these so-called "common branches." They omit the foundation, and build up a vast and imposing structure of showy accomplishments. No sooner does a pupil of one of these schools attempt to enter upon the busy scenes of life, than he finds this "castle in the air," built at so great a cost of time and money come tumbling down about his ears.

It is in part to the business college that we must look for a remedy for this state of affairs. These schools, when properly conducted, lay the foundation firmly by imparting thorough instruction in all the more useful branches of an English education. Then the structure built thereon in not merely ornamental—it is massive, and it has a look about it of commercial utility, suggesting the scenes of a busy and useful life in the arena of business. The lessons there imparted have special reference to the practical affairs of life. They teach the pupil how to make himself useful in any capacity, and how to earn his living honorably. They impart to him confidence in his own abilities, through use of them while at school, and furnish him with the tools with which he must work out his success in his after cares. These institutions have been of great assistance to the aspiring young men of our country, and hence their remarkable popularity.

Tropical Plants for Ornamental Purposes, etc.

Among the great variety, I would mention some of the palm family, and first, the corypha Australis, or in common parlance, the Australian cabbage palm; the Cycas revoluta, or sago palm; the foliage is most graceful. Isaboea spectabilis produces a sweet syrup called palm-honey used for domestic purposes. The nuts are used by confectioners, and by the boys as marbles. The leaves are employed for thatching roofs, etc., whilst the trunk, which is hollow and very hard, is converted into an excellent water pipe for the purposes of irrigation, etc.

But the most available tree for ornament and use, with which I am familiar, is the celebrated Bahia, or Naval Orange, the king of oranges, without pulp or seeds, smooth and thin-skinned, the flavor most delicious. And last, but not least, is the Passaflora or Granedillis, the Garabalda and Chinese Peach, the former of which is not only graceful as an ornament but produces abundance of fruit every month in the year—in this respect like the Naval Orange. The smaller variety is the best fruiter, and resembles strawberries and cream. It also forms a delightful shade for balconies, verandahs, or out-houses, etc., being one of the greatest runners, and will make its way over the house top, if allowed so to do.—*Wm. Hobbs, in Los Angeles Express.*

Several fruit-dealers in Portland, Me., are sending apples to Europe, receiving twelve dollars a barrel.

Household Reading.

Love Lightens Labor.

A GOOD wife rose from her bed one morn,
And thought, with a nervous dread,
Of the pile of clothes to be washed, and more
Than a dozen mouths to be fed.
There were meals to get for the men in the fields,
And the children to fix away
To school, and the milk to be skimmed and churned;
And all to be done that day.

It had rained in the night, and all the wood
Was wet as wet could be;
There were puddings and pies to bake, besides
A loaf of cake for tea.
And the day was hot, and her aching head
Throbbed wearily as she said,
"If maidens knew what good wives know,
They would be in no haste to wed."

"Jennie, what do you think I told Ben Brown?"
Called the farmer from the well;
And a flush crept up to his bronzed brow,
And his eyes half bashfully fell.
"It was this," he said, and coming near,
He smiled—and stooping down,
Kissed her cheek—"'twas this: that you were the best
And the dearest wife in town."

The farmer went to the field and the wife
In a smiling absent way,
Sang snatches of tender little songs
She'd not sung for many a day.
And the pain in her head was gone, and the clothes
Were white as the foam of the sea;
Her bread was light and the butter was sweet,
And as golden as it could be.

"Just think," the children all cried in a breath,
"Tom Wood has run off to the sea!
He wouldn't, I know, if he only had
As happy a home as we."
The night came down and the good wife smiled
To herself as she softly said
"'Tis so sweet to labor for those we love,
It's not strange that maidens will wed,"

Letter From Nell Van.

My dear "Snip," your "Familiar Talks" in the July number of the Agriculturist sounds much too sensible and practical for one bearing so flippant a cognomen; still, we will not quarrel about that, since a rose by any other name is as sweet. I have been reminded that the name I bear (which answers my purpose well enough) is too undignified for the matronly advice offered so quaintly at various times to the readers of this charming little household journal.

Your useful suggestions are doubtless being put in practice all over the State by many a young house-keeper, and thoughtless old one, who, like myself, feel glad of any improvements in the kitchen department.

As an interchange of thought is often desirable, and as we may never meet and become acquainted other than through these columns, I will offer a few of my own house-keeping experiments.

Carpets will wear and preserve their beauty twice as long if, when beginning to show signs of wear, they be ripped apart in the center and the two outer seams sewed together.

Stair carpets should be taken up as often as once in two months, shaken, and slipped so that the edge of the stair comes in a new place. To do this, it is necessary to buy the carpet a yard or so longer than needs, and the difference in the wear of the carpet will more than compensate for the extra expense.

Many good house-keepers always put straw underneath their three-plies and ingrains, but I find thick paper, or several thicknesses of newspaper, quite as good, and always use it under all my carpets for it keeps out cold and dampness.

To clean paint, put a teaspoonful of ammonia into a quart or more of blood-warm water, and the finger marks and fly specks

will vanish as if by magic if applied with the softest cloth.

Those troubled with ants in their pantries may rid themselves of the torments by getting a dime's worth of corrosive sublimate and put in a common spice bottle with alcohol to dissolve it, and fill the cracks along the wall of each shelf, and wherever the vermin may gain a foothold. It saves the necessity of plates of water for sugar-bowl and such things and only needs renewing once a year.

Santa Cruz, July, 1875.

Taking It Coolly.

Mrs. Kate Hunnibee says: One of the most disagreeable companions on a hot summer's day is a hot stove, and yet how many women who read the article feel compelled to spend many hours out of every twenty-four with this black, fiery kitchen partner. Is there no escape? Suppose the kitchen door opens on an ample porch, with a roof over it, and a honeysuckle in front of it, or a grape-vine, or a hop-vine, or morning-glories, or flowering beans clambering up a trellis and shutting out the ardent rays of the sun. What a nice place that would be for carrying on the various activities of a summer's morning. One could wash there, spread the ironing table beneath the growing grapes, set the dinner table there, shell peas, stone cherries, and do a thousand other things in the open air while keeping an eye on all that goes on in the kitchen. If there is but a step from the house to the ground, two or three larger trees just at the door are better even than a porch. We lived in such a kitchen once, and spent all the pleasant summer days in the open air. The cradle had a little awning over it, there was no clatter of shoes on the grassy sod beneath no slops on the floor, no furnace heats, nothing but rural peace and quiet shade.

It does not occur to a great many women that there is any better or easier way of doing than the one to which they have become accustomed. The tendency of housework is to settle into a fixed routine and wear deep ruts, to go out of which is no easy matter. But it is not a bad plan to start inquiries in every department of domestic industry, and try experiments until one finds out the easiest way of accomplishing the matter in hand. In the winter, of course, the nearer the ironing and baking table is to the stove the fewer steps will be required, but this is not the first consideration in Summer, and if one will have a high chair to sit in while ironing or baking on a low table, the distance from the stove will not amount to much. Beside, children of five and six years old can be taught to take steps.

There is another matter not very well understood by American cooks. We use entire too much fuel; we cook by too hot a fire, we eat too much hot food, we boil our soups and vegetables furiously, when all we want is to raise the temperature of the liquid in question to 212°, which can be done with a moderate fire and no inconsiderable saving of stove-lining, coal, and physical discomfort. It is calculated that one-third of the power generated in any machine is consumed in overcoming the friction, and one great problem with machinists is to reduce the friction to its minimum. Let us apply this problem to housekeeping, and begin by studying all the ways in which we can keep cool.—*N. Y. Tribune.*

Profit of Marrying.—Here is what an old Kentucky farmer says about his wife:

I have been married twenty-two years. The first four years before I was married I began farming with two hundred and fifty acres, in Blue Grass region, Kentucky. I handled cattle, hogs, sheep and horses—principally the first too named—and lived, I thought, tolerably economically; spent none of my money for tobacco in any way; neither betting a cent or dissipating in any way, and yet at the end of four years I had little or no money. I then married a young lady of eighteen years of age—who had never done any housework or work of any kind except to make a portion of her own clothes. She had never made a shirt, drawers, pants or waistcoat, or even sewed a stitch on a coat, and yet before we had been married a year she had made for me every one of the articles of clothing named, and knit numbers of pairs of socks for me—yes, and mended divers articles for me, not excepting an old hat or two. She had also made butter, sold eggs, chickens, and other fowls, and vegetables to the amount of near six hundred dollars in cash, at the end of the year, whereas, during the four years that I was single, I had never sold five cents' worth—besides making me purely happy and contented with my home. And so far as to making of money, we have made money clear of expenses ever since we have undertaken the farm, and she has made three hundred and fifty to five hundsed dollars every year except one, during the time, selling butter, eggs, and marketing of different kinds. My yearly expenses of fine clothing, etc., before I was married were more than my yearly expenses were after I was married combined with the expense of my wife and children; and our farm has increased from two hundred acres; and I believe that if I had not married, it never would have increased but little if any; and I have never been absent from home six nights, when my wife was at home, since we were married, and her cheeks kiss as sweetly to me as they did the morning after I was married.

Engaging Manners.—There are a thousand pretty engaging little ways, which every person may put on without running the risk of being deemed either affected or foppish. The sweet smile, the quiet, cordial bow, the earnest movement in addressing a friend, or more especially a stranger, whom one may recommend to our good regards, the enquiring glance, the graceful attention which is so captivating when used with self-possession—these will insure us the good regards of even a churl. Above all there is a certain softness of manner which should be cultivated, and which in either man or woman, adds a charm that almost entirely compensates for lack of beauty. The voice can be modulated so as to intonate that it will speak directly to the heart, and from that elicit an answer; and politeness may be made essential to our nature. Neither is time thrown away in attending to such things, insignificant as they may seem to those who engage in weightier matters.

Very True.—Some one has well said that "parents who spend money judiciously to improve the house and grounds about it, are paying their children a premium to stay at home and enjoy it; but when they spend money unnecessarily on fine clothing and jewelry for their children, they are paying them a premium to spend their time away from home—that is, in places where they can display such ornaments."

A Happy Home.—In a happy home there will be no fault-finding, over-bearing spirit; there will be no peevishness or fretfulness. Unkindness will not dwell in the heart or be found on the tongue. Oh, the tears, the sighs, the wasting of life and health and strength, and of all that is most to be desired in a happy home, occasioned merely by unkind words! A celebrated writer remarks to this effect, namely, that fretting and scolding seem like tearing the flesh from the bones, and that we have no more right to be guilty of this sin than we have to curse and swear, and steal. In a perfectly happy home all selfishness will be removed. Its members will not seek first to please themselve, but will seek to please each other. Cheerfulness is another ingredient in a happy home. How much does a sweet smile, emanating from a heart fraught with love and kindness, contribute to make home happy. At evening, how soothing is that sweet cheerfulness that is borne on the countenance of a wife and mother! How do parent and child, the brother and sister, the mistress and servant dwell with delight upon those cheerful looks, those confiding smiles that beam from the eye and burst from the inmost soul of those who are dear and near! How it hastens the return of the father, lightens the cares of the mother, renders it more easy for youth to resist temptation, and drawn by the chords of affection, how it induces them with lowly hearts to return to the yaternal roof. Seek then to make home happy.—*Ex.*

Show and Parade.—We find the following floating among our exchanges, and it strikes us as being worthy of being read and pondered by all:

The world is crazy for show. There is not one, perhaps, in a thousand, who dares fall back on his real, simple self for power to get through the world and exact enjoyment as he goes along. There is no end to the aping, the mimicry, the false, airs, the superficial airs. It requires rare courage, we admit, to live up to one's enlightened convictions in these days, unless you consent in the general cheat, there is no room for you among the great mob of pretenders. If a man desires to live within his means, and is resolute not to appear more than he really is, let him be applauded. There is something fresh and invigorating in such an example, and we should honor and uphold such a man or woman with all the energy in our power.

Despondency.—What is the cause of spondency? What is the meaning of it? The cause is a weak mind, and the meaning is sin. Nature never intended that one of her creatures should be the victim of a desire to feel and look the thunder-cloud. Never despond, for one of the first entrances of vice to the heart is made through the instrumentality of despondency. Although we cannot expect all our days and hours to be gilded as sunshine, we must not, for mere momentary griefs, suppose that they are to be enshrouded in the mists of misery, or clouded by the opacity of sorrow and misfortuno.

A Milanese lady, after long study and toil, has invented a process to spin the gossamer threads from cold cocoons, which affords considerable advantages on the old method of using heated water, viz.: less space, no coal, less trouble for the spinner, and greater strength in the silk obtained.

SAN JOSE INSTITUTE AND BUSINESS COLLEGE.

San Jose may well be proud of its educational privileges, and of no one school more than this Institute and Business College. Mr. Kinley, who has lately become proprietor of this school, is an experienced educator, and under his superintendence it will not be likely to lose any part of its well-earned reputation as a first-class institution of learning. We have often referred to this school, and feel it is worthy of the attention of all who design giving their children a practical education. It is to such institutions as this that we must look, in a great measure, for a remedy for the imperfections in our public system of education. To be educated to advantage, it is not enough that we understand the theory, we must have the ability to apply what we have learned. This is the object of the business college. The course of instruction in our San Jose Institute seems to be complete in the various branches. The school offers many advantages, and although it is graded, students may, at any time, pass into higher grades in any branch, if on examination, they are found qualified to do so. Persons who are early education has been neglected may receive special instruction without the annoyances of public schools. Throughout the whole course of study two fundamental purposes are kept constantly in view: the mental and moral growth of the student, and his qualification for the labors and duties of life. Mr. Kinley hopes to be able to add an agricultural department to the school in a short time, and to make the institution worthy the interest and patronage of the public. Mr. Vinsonhaler is still principal of the business department to which he devotes his entire attention. There is no vacation to his department. This gives the pupils a chance at any time to continue their studies.

Conifera of the Pacific Coast.

J. Begg, of Gilroy, has been making a collection of the different conifera of this coast, for the Centennial Exhibition at Philadelphia. He has already been at the work for several months, and collected over 2,500 specimens. He intends making a structure thirty-five feet high and twenty-five feet in diameter. The base will be octagon in shape, with arches twelve to fourteen feet high, and decorated with the cones and foliage of the different species of evergreen trees, forming an entirely unique exhibit—different from anything ever presented to the world before. The base of the structure will be a repository for the exhibition of California. He has correspondents collecting in different parts of the coast. The captain of the Alaska Fur Company's vessel cruising in the Northern Ocean and the Aleutian Islands has promised to make a collection, and gentlemen interested in the matter in Alaska and British Columbia are also assisting. Mr. B. would be glad if any one having fine specimens of cones, or being in a vicinity where such could be obtained, would send them in to him, care of W. J. Turnbull, Sansome street, San Francisco, as he is desirous of having all the varieties found on the Pacific Coast included in his collection. He intends to exhibit a model of his cone pyramid at the coming Mechanics Fair, which will, we predict, be one of the most original and attractive objects in the exhibition. We hope his efforts will be generously seconded.—*Bulletin.*

We visited the San Jose Institute lately, and in passing through the parlors noticed some very fine paintings, the work of Mrs. Kinley, wife of the Superintendent. Many of the pictures were original and spoke of talent that would do credit to some of our more pretentious artists. One of these, a sunset scene in Indiana, was especially well executed. Among the copies were two scenes from Cole's Voyage of Life that were very beautiful indeed.

A Chance for Men of Small Means.

It is generally conceded that to make a success of orange-growing a man must have capital. Land that is suitable for their culture and that is well supplied with water cannot be bought for less than one hundred dollars per acre, and often costs more. The trees cost from one to three dollars each, according to size, and to prepare the ground and plant out is an expensive job. When all this is done, the trees must have constant attention and careful cultivation for eight or ten years, before they will return much of an income. It is therefore plain that a man who desires an orange orchard, especially if he is anxious to get it as soon as possible, must be prepared to lay out a good deal of money, at once, and to continue laying it out for a number of years. This being the case, the poor man may well at once dismiss from his mind the illusion that he can come to Southern California, and in a few years possess an orange orchard of fabulous value, unless there is some way in which he can make his living and make his orchard as he goes along. We believe there is a way for the industrious man of small means.

There are men within five miles of this city at the present time, struggling under a load of debt, and trying to hold on to their orange orchards till they come into bearing, who yet do not seem to know that in the cultivation of small fruits and vegetables is their chance for salvation. They borrow money at high rates of interest, and potter around waiting for their trees to produce, and at the same time buy their vegetables, or do without.

It seems to us that a man with a few hundred dollars, and a little industry, can certainly make money in a small way, but a sure one by undertaking the culture of small fruits and vegetables. If he is ambitious of possessing an orange orchard, he can grow one in the meantime. With a few acres of land suitable for vegetables, he can, with hardly any additional expense, raise his own trees, plant them out and care for them, and when they have come to maturity, bringing in a good round income, he will have the satisfaction of knowing that they are the reward of his own industry, with no mortgage on them for capital invested that was not his own.

In this way, men of energy, with a few hundred dollars for a beginning, can make a good living and secure a home surrounded by all the associations that cling to a home made by one's own hands.—*Semi-Tropical Farmer.*

The statistics furnished by Mr. Dodge to the Department of Agriculture reveal, in startling figures, the vast natural wealth of our country. Less than one-fifth of the entire area of the United States is occupied by farms, of which only one-fourth is under tillage. Notwithstanding our enormous wheat crop, the land which produces it is not equal in extent to the surface of South Carolina. Our national crop, maize, covers a territory not larger than Virginia, and the potato crop could grow in less than the area of Delaware. In view of these figures, who can question the boundless resources of America, or look with misgiving upon our steady tide of immigration?

Don't marry a man if he drinks.

Home.

Best of all things to us is home. In hours of ambition and pleasure we may sometimes forget its exquisite sweetness, but let sickness or sadness come, and we return to it at once. Let the hollow hearts that feign a friendship which they do not feel, stand revealed before us—let us know, as we all must at moments, that however important we may be in our own estimation, our places would be filled at an hour's notice should we die to-morrow; then we whisper the magic word Home, and are comforted.

"Home, Sweet Home!" It does not matter how humble it is, nor is it less a home for being a palace. It is where those we love dwell—wherever that may be—where we are valued for ourselves and are held in esteem because of what we are in ourselves and not because of power, or wealth, or what we can do for other people.

Who would be without a home? Who would take the world's applause, and honor, in place of the tenderness of a few true hearts and the cosy fireside meetings where the truth may be spoken without disguise, and envious carping are unknown? In life's battle even the hero finds many enemies and much abuse and slander and detraction; but into a home, if it is what it ought to be, these things never find their way. There, to his wife, the plainest man becomes a wonderful thing—a sage, a man who ought to be President of the United States, and would be were his worth known.

Aeerican Farmers.—We hazard the assertion that no class of equal average means live so well as American farmers. One of them possessing a farm and buildings worth ten thousand dollars will gather about him and enjoy more real comfort than could be obtained from the income of one hundred thousand dollars in New York. He may live in a more commodious building than a metropolitan citizen having ten thousand dollars income. He may have his carriage and horses. His table may be supplied with everything fresh in its season. His labor is less wearing than the toil of counting-rooms and offices, and he has more leisure.

Rev. Daniel Waldo once said: I am now an old man. I have seen near a century. Do you want to know how to grow old slowly and happily? Let me tell you. Always eat slowly—masticate well. Go to your occupation smiling. Keep a good nature and soft temper everywhere. Cultivate a good memory, and to do this you must be communicative; repeat what you have read; talk about it. Dr. Johnson's great memory was owing to his communicativeness.

It is said that grasshoppers will not eat peas. A farmer in Minnesota who observed last year that peas were not harmed, planted 200 bushels of peas this year and they have not been touched. Peas make an excellent substitute for corn to feed to stock, and the fact that they can be raised in the grasshopper region is an important one.

We are a believer in pedigrees for all of the animal kingdom that has been subjected to the uses of mankind, but believe that it is by a selection of the *best* animals of a kind or family, that the race is improved, not by using everything that has the blood of a particular family in it to perpetuate the species.

The man who is only honest when honesty is the best policy is not really an honest man. Honesty is not swerving policy but stable principle. An honest man is honest from his inmost soul, nor designs to stoop to aught that is mean, though great results hang on the petty fraud.

Self-respect is the noblest garment with which a man may clothe himself—the most elevating feeling with which the mind can be inspired. One of Pythagoras' wisest maxims, in his golden verses, is that which enjoins the pupil to reverence himself.

The idea of turning a portion of the waters of the Colorado river from their present bed and cause them to run upon the lands of the Colorado Desert so as to reclaim it from its present waste and worthless condition, is a part of the plan of survey upon which Lieut. Wheeler is at present engaged.

It has been estimated that the American nation smokes 5,168,000 cigars a day. This, at five cents a cigar (and what sort of a cigar can you get for five cents?) would amount to over $250,000 a day.

Physician—"Why don't you set a bound to your drinking, and not exceed it?" "So I do, old fellow, so I do; but then, you see, it's so far off that I always get drunk before I reach it."

Value the friendship of him who stands by you in the storm; swarms of insects will surround you in the sunshine.

What is the use of talking of this world's brightness and sunshine to a man that has tight boots?

Jokes are like nuts—the drier they are the better they crack.

A good throw at dice is to throw them away.

☞ The National Gold Medal was awarded to Bradley and Rulofson for the best Photographs in the United States, and the Vienna Medal for the best in world. au
429 Montgomery Street, San Francisco.

THE report that Treadwell & Co., of San Francisco, are closed up is not true, says the *Rural Press*. They are selling harvesting machinery and other goods as usual, although much of their large stock is being sold, it is said, below cost.

☞ Any party wishing to obtain a lot of graded Angora goats would do well to notice Shane & Belknap's advertisement, on second page of this issue. Any one having sheep to let should correspond with box 32, Carson City. See advertisement on first page.

☞ Our readers will notice that Reardon & Co. have disposed of their carriage manufactory to Limerick & Muthwillig, two young men who were formerly in their employ. The business will be carried on at the same place, and in a manner deserving of patronage.

☞ Mr. E. G. Wilson is prepared to do all kinds of plumbing and gas fitting in a satisfactory manner, and at reasonable prices. He is also agent for the Slouther pump, which may be seen at 335 Santa Clara street.

☞ A new dental offices has been opened over Rhodes & Lewis' drug store by Drs. Hooker & Finigan, who promise good work.

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A Standard Temperance Prize Essay.

TO THE FRIENDS OF TEMPERANCE.

The Committee appointed by the National Temperance Convention, held at Saratoga, in 1873, on the subject of a Standard Temperance Work, decided to divide the work into three parts, and to offer Two Prizes for each of the three essays, to be open to all writers who choose to compete therefor, in this and other countries:

1. The Scientific; embracing the Chemical, Physiological, and Medical aspects.

2. The Historical, Statistical, Economical, and Political.

3. The Social, Educational, and Religious.

The fund at command, through the efforts of Job H. Jackson, of West Grove, Chester county, Pa., enabled the Committee to offer one year ago Prizes of $500 and $300 for accepted manuscripts for Part I, and the responses of writers, now under examination, lead the Committee to hope for a work of value commensurate with the great cause it is expected to promote. This encouragement and the fund at command, and personal guarantee of Mr. Jackson, now further enables the Committee to announce Two Prizes for Part II—the Historical Statistical, Economical and Political, and Two Prizes for Part III, embracing the Social, Educational and Religious relations of Temperance viz: For the best essay for each of these parts, adjudged satisfactory, the sum of $500 will be paid; for the second best essay, the sum of $300 will be paid; accepted manuscripts to become the property of the National Temperance Society.

The offers for Part II and Part III will remain open to all competitors one year, till July 1, 1876. Manuscripts [with the names and addresses of the writers by whom they are forwarded for competition, enclosed in separate sealed envelopes, not to be opened till after the award has been made] should be forwarded to A. M. POWELL, 58 Reade street, New York.

The essays should be of such a character that, while adapted in style to interest the general reader, they will also meet the demands of scholarly criticism.

Those who intend to compete for the prizes offered for these essays, and who may desire more information as to the scope of the work and suggested subdivisions, will be furnished with further particulars by applying to Mr. Powell, as above.

In order that the completed Standard Work may be placed before the public at the earliest practicable day, the Committee urgently appeal to friends of temperance to promptly supply them with funds to meet the prizes announced and to publish the work. The sum of $500, at least, additional to that on hand, will be required. Contributions may be sent to JOB H. JACKSON, Treasurer, West Grove Chester county, Pa., to J. N. STEARNS, Publishing Agent of the National Temperance Society 58 Reade street, New York, or to any member of the Committee.

A. M. POWELL,
JAMES BLACK,
R. C. YITMAN,
A. A. MINER,
NEAL DOW,
} Committee.

58 Reade st., New York, March, 1875

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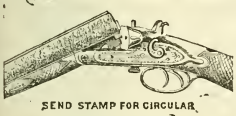

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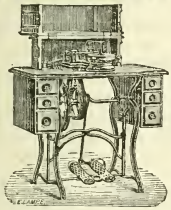

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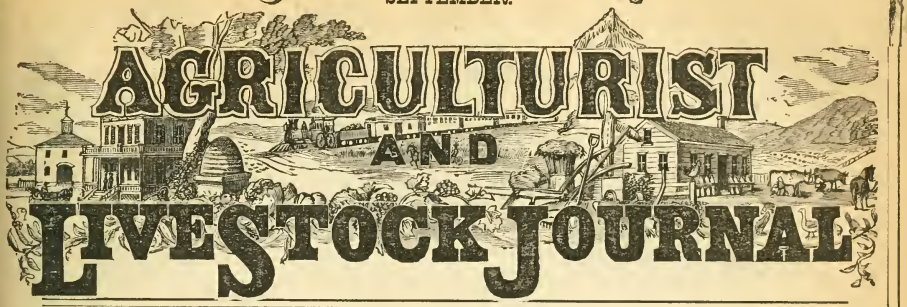
Volume 6. CALIFORNIA Number 9.

SEPTEMBER.



Subscription Price, $1.50 a year. } SAN JOSE, CAL., SEPTEMBER, 1875. { Single Copies, 15 cents.

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Domestic	49,554	40,114	22,700	" 26,854
Weed	42,444	21,709	20,595	" 21,949
Wilcox & Gibbs	33,639	15,881	13,719	" 19,920
Wilcon	22,666	24,247	17,525	" 5,141
American B. H.	18,930	14,182	13,529	" 5,401
Gold Medal	18,897	16,431	13,214	" 5,683
Florence	15,793	8,760	5,517	" 10,276
Howe			c8,35,000	
Victor	11,901	7,446	6,292	" 5,609
Davis	11,376	8,861		
Bees	6,052	3,458		
Remington Empire	4,962	9,183	17,608	In. 12,626
Brunsdorf & Co.	4,202	3,081	1,806	dec. 2,396
Keystone	2,665	247	37	" 2,628
Bartram & Fanton.	1,000	1,000	250	" 750
Secor	311	3,430	4,541	In. 4,230

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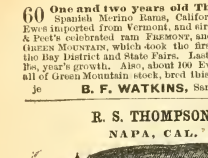

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The California Agriculturist
AND
LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., September, 1875. No. 9.

CONSISTENT AND INCONSISTENT IRRIGATION OF ORCHARDS.

If an orchard has been irrigated until the surface soil is filled with roots, and then the irrigation of it is neglected for a single season, the drying out of the soil, filled with roots dependent upon it for moisture, will be likely to kill the trees outright; and at any rate they will be severely injured. We have noticed several cases of this kind, first and last, and although we have several times spoken of it, yet we every season see some orchard suffering from such neglect, through the apparent ignorance of the proprietor, who as likely as not, wonders what is the matter with his orchard, and thinks that fruit-trees are short-lived in this California soil and climate. He will tell you how he has irrigated his orchard and cared for it, to give it a good start, and now, when the trees should grow and bear fruit without all that extra care, they "up and die."

Now, while we advocate the irrigation of the orchard where one is so situated that it can be done every summer, we must advise not irrigating at all unless it can be done every year in a consistent manner. There are several good orchards that we have noticed, growing on upland soil without irrigation. They will not produce as much, nor as fine, large, juicy fruit, as an orchard that is irrigated, but the trees are always looking fine and healthy. Such trees, not irrigated, run their roots deeply into the soil, and do not depend upon surface moisture. They grow their roots, as do the California oaks, away below the reach of drouth and hot, dry, cracking surface soil.

On the contrary, trees grown upon soil kept moist by irrigation, spread their roots upon the surface, and send very few deeply into the earth. If such trees are not kept supplied with surface-water, the result must be, and always is, serious. The roots and sap dry up, the leaves turn yellow and fall, and the tree dies of thirst and starvation. The soil in an orchard to be grown without irrigation should be kept loose by cultivation, to prevent the loss of moisture from the under soil by evaporation.

The pruning should be just enough to prevent straggling—just enough to make close, symmetrical, spreading heads. No inside thinning-out should be done. An orchard that, for lack of water, can be irrigated only one, two or three times during the dry season should be cultivated on the same plan as for one not irrigated; and when the water is to be let on, it should be run between the rows in a deep furrow, and not be allowed to wet the loose soil upon the surface at all. And further, when the water is turned out of a furrow, the furrow should be covered up with loose soil to prevent the soil from cracking and the water from escaping into the air.

This system, where trees are watered only occasionally, is excellent, as the roots are encouraged to run deeply, and will never come near the surface except at the furrow in which the water is run. This being some distance from the trees will be all the better: the feeder-roots will take it up gradually. One or two good waterings in this way during the season, letting the water soak into the soil thoroughly in one furrow before running it into the next, will help an orchard wonderfully. The same amount run about the trees upon the surface, would injure instead of benefitting the orchard. The only exception to this rule is upon loose sandy soil with a gravel bottom, where the wafer would leach away instead of soaking into the under soil.

Where abundance of water can be had for irrigating purposes, it has been found to be the best plan to conduct it through among the trees, as nearly upon the surface as is convenient. The soil is to be cultivated lightly as soon as the ground is dry enough to work well after irrigating, and when the soil shows that it is getting dry the same thing is to be repeated. An orchard irrigated on this plan will make a very vigorous growth and produce an immense crop of fruit, and fine fruit, too. The roots will be found near the surface spread like a mat. The finest orchard in the State, Mr. G. W. Tarleton's, is irrigated on this plan, and a plow is never stuck into the ground for fear of injuring the roots, but a cultivator, graded to cut two inches, is run amongst the trees often enough to keep the surface clean and light.

Several persons near San Jose who have cultivated strawberries in their orchards for some years, irrigating the same all summer to keep them growing nicely, and who have dug up the berries and stopped irrigation, have seen their trees die and become worthless. We think it important that every farmer should understand the philosophy of irrigation well enough to never make mistakes of this kind.

SOMETHING ABOUT ORCHARDING

We have taken a look through several orchards this month, and observed many things in the way of fruit and culture worthy of note. Mr. J. M. Patterson, who owns the finest prune orchard, although his crop was cut very short by frost, is still as sanguine as ever and making improvements. His orchard is on moist rich soil, and has never been irrigated, but Mr. P. is making preparations for irrigation, has a Kipp's upright boiler and engine of 3½ horse power which will run two 6 inch pumps, raising water about ten feet. The water stands in the bored well only seven feet from the surface. He has laid a six inch square redwood pipe or floom, 18 inches under ground along the upper side of his grounds. At convenient distances are plugs four inches in diameter, so that the pipe can be tapped and the water conducted at will through any portion of the orchard or blackberry patch. The cost of such a pipe laid down is about $2.00 per rod, and when once placed will last for years and no trouble. Mr. P. thinks that even on his superior moist soil it will pay to irrigate when the fruit is growing. Heretofore he has produced the finest plums and prunes ever seen in market. The cost of Kipp's 3½ horse power upright engine and boiler was $4.50 laid down, and about $60 to set the same, including crank attachments to the pumps. The pumps cost $25 each.

Persons wishing to irrigate with steam power, would do well to examine Mr. Patterson's rig which is most complete and economical in every respect. Mr. Patterson has some old fashioned damson trees in his orchard which the frost did not injure. They have been planted 22 years, and are still fine and healthy and loaded with beautiful fruit. He has several times realized $25 per tree from them in a single season, and will get probably more this year. We picked from a pear tree some Sickle pears that were larger than the average of large Winter Nellis pears. We had to ask the name of them, although we are used to seeing the wonderful productions of California. We never saw finer Bartletts, Flemish Beauties or Buerre Clargeaus. Mr. Patterson's system of cultivation is similar to that of Mr. Tarleton's thorough surface cultivation, only a little deeper, as the surface has not been irrigated. Mr. Pattersons orchard trees are set closer together than trees in any other orchard we know of, excepting the one we shall next notice. He has obtained more fruit from the acre and better fruit by so planting. In our sunny and windy country, we have long been satisfied that close planting is best and have frequently said so before.

Mr. Charles Caine, a prominent fruit producer and dealer, has tried the experiment of planting cherry trees in an apple orchard, between the trees in every row—and with the best success. He can show as fine a growth of cherry trees—and that without irrigation—as any person in the State. His apple orchard, when he purchased it a few years since, was in a neglected condition. It is now fine, all grafted to Newtown pippins and valuable, bringing in a good revenue annually.

Next season Mr. Caine expects a fine crop of cherries from the same orchard without diminishing the apple crop. The only fair crop of peaches near San Jose this season was produced by Mr. Caine. When the nights were frosty in April, and killing everybody's else fruit, Mr. C. built fires among his trees, using brush, straw, and strawy manure for the purpose. As the frosts continued several nights in succession, he ran short of fuel, but managed so as to get a very fair crop of splendid peaches, and he sold them for a big price. A lot of large old apricot trees that are on one of his rented pieces became straggly and spreading out of shape. He cut the limbs well back within a few feet of the trunk last Spring. The result is beautiful, round heads of numerous new limbs, promising lots of fine fruit another season. Every season Mr. Caine "colors" his best fruit for market. This is not done with paint and brush, but with sunbeams. The fruit, after picking, is laid for a few days under a half-shade, so as to get the light without sun-burning. The fruit soon colors up in a beautiful manner. Every one has noticed that while some fruits on a tree are high-colored, others on the same tree are not. The action of sunlight is only needed to give all a charming color. This ripening and coloring process completed, the fruit is nicely packed in boxes and brings the fancy prices—more than double what it would if shipped at once without this trouble. Mr. C. studies to make whatever he undertakes *pay*, and so far with success. The day we were at his place his team was hauling manure to spread thickly upon the soil among his trees. This is something that he knows will pay in increased size of fruit and tree-growth. Thorough surface cultivation is the rule with him, as with all best orchardists.

Benj. Casey. S. H. Herring.

California Agriculturist and Live Stock Journal.

S. HARRIS HERRING & CO.,
Editors and Publishers.

OFFICE: Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

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" fourth Column	4 00 " "
" eighth Column	2 00 " "
" sixteenth Column	1 00 " "

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The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

The State Short-Horn Convention will meet in regular Semi Annual Convention, on Wednesday the 22d of the present month (September) during the week of the State Fair. There will be no public auction sales of stock under the auspices of the Society, but we learn that several breeders are intending to make sales on their own account. The general impression among breeders of fine stock is that the spring is a better time for making sales than the fall of the year.

Saving Straw for Stock has finally got to be the rule as it should be on grain farms, instead of the wasting and burning it as was so generally done a few years since. The value of a good straw stack for stock, when feed is short, is being appreciated.

Now the question is, the most convenient and economical way of saving. Undoubtedly an elevator attached to a separator for stacking straw is a great improvement. It saves much time and labor, and will soon be considered an indispensible attachment to all California separators.

Some farmers are thinking of building large sheds, or roofs, in convenient parts of grain fields, where stock can be fed handily, for sheltering straw every season; and they will then stack the grain along side so that the straw elevator will deposit the straw under cover directly from the threshing machine.

Those who have tried this method of saving straw, could not be induced to go back to the old way. We commend this idea to such of our readers as may feel interested in the matter.

Many Subscribers have asked us how they shall remit money. While the matter of remitting a small subscription for a paper should be the easiest thing in the world to do and everybody should know just how to do it, it still is a matter of considerable moment to many who wish to pay for their papers; and it is of some concern to publishers who need these small amounts which aggregate so much when counted upon the books, and without which crumbs a poor publisher would starve. Were currency as good as gold, as it should be, a post office order would be preferable to anything else. Now, if you buy a $1.50 post office order with coin, it is payable to us only in greenbacks, and we loose about 15 cents, which we cannot afford to do while we have to pre-pay that much postage on the Agriculturist. But $1.50 in coin will bring about $1.68 in currency and this will buy a post office order payable to us in like amount, which will be satisfactory to us, and is really the most convenient way of sending small amounts through the mail. An order will cost 5 cents, postage 3 cents more.

Sometimes money comes to us through Wells Fargo Express, costing the sender or us 25 to 50 cents for $1.50. This is paying rather dear for the whistle, although we believe a man better do that than not take the Agriculturist and Live Stock Journal, and pay for it too. Another good and convenient way is to send a check on a San Jose or San Francisco bank. The merchant, where you purchase your family supplies, would most likely furnish you with a check for the money which we could easily get the money on. We advise this as another most convenient way of sending money. The check, which can only be paid to us or our order, can be sent as an ordinary letter with but three cents postage. Be sure and send in same letter your full address, name and post office plainly written. Please do not forget, however, that whatever way you do send it, the most important part of the transaction to the publisher is to get his dues, and one year in advance.

We are asked what are our lowest subscription rates to Patrons of Husbandry. We would like to be able to afford the Agriculturist and Live Stock Journal for half-price to everybody, and give a good farm for a premium besides; but the truth is, $1.50 a year is as low as we can publish it, without several thousand more subscribers; and if every one who takes it doesn't have a better farm, by doing something to make it better, either we do not make a paper worth taking or he does not read as carefully as he might, or else does not practice as well as he should. We believe in the co-operative principle, and if publishing a paper for everybody at a low price does not come near practicing the principle on our part, we would like to know how to better it. A little more co-operation on the part of some of our subscribers in the small matter of paying up promptly, would be appreciated and help matters wonderfully. We shall expect all good Patrons to be willing to co-operate with us, for we are trying to make just such a cheap Monthly Journal as every farmer on the Pacific Coast ought, and can afford to have; in fact, cannot afford to do without.

To our Correspondents or about them we have said very little through the columns of our Monthly, but we feel under many obligations to them and know they have done very much to make the Agriculturist and Live Stock Journal interesting to all readers. And this our readers will attest to, and for our readers we say thanks to you all, and may you never cease to favor our columns. We wish that all farmers and farmer's wives and daughters would feel it a duty and privilege to write something of their experience and ideas upon subjects which interest all. It is *your paper and you* who like to read it should write for it.

By the way, "Uncle Ben" has been able to give a Boys and Girls department entirely original this month, thanks to the young folks. We want you all to write. The Domestic department is also original and good too. We have another "Chat" from "Jewell" on hand for next month, also two other of her articles: "how to dress babies" and "two ways of feeding babies"—both invaluable to mothers who have the care and responsibility of the most precious live stock raised on the farm. These will appear, one next month and the other the following.

It is always most convenient to publishers to have articles come in early, but better late than not at all.

A Recent Ramble through John Rock's nursery discovered to us many things interesting. Within two years Mr. Rock has added greenhouse culture to his other branches of that business. Among the many novelties seen, we will notice his collection of choice palm-trees. At great expense he sent to Central America and Mexico for seeds of the finest varieties of palms, and has been successful in starting over five thousand trees which are growing finely. This is a valuable acquisition to Califsrnia. It is just what we want to see. Mr. Rock can probably come as near filling any order for choice plants and trees of all kinds, as any nurseryman in California.

Our Lompoc Correspondence will be found very interesting. Some of our exchanges which cater to the powerful liquor interest, characterize the proceedings of the temperance women at Lompoc as a disgraceful mob, and say they had better try and cover up their drunkards' shame. We say good, bravo, glory to the women of Lompoc! Uncover the demon alcohol wherever you can find him. Beat him down and out—with law or without law. Give it no rest amongst you. Never hesitate about the means, but do quickly what you find to do, and fail not, falter not in well-doing.

A farmer complains that a hook and ladder company has been organized in his neighborhood. He states that the ladder is used after dark for climbing into his hen-house, after which the hooking is done.

Poetry.

Better Than Gold.

BETTER than grandeur, better than gold,
Than rank and title a thousand fold,
Is a healthy body, a mind at ease,
And simple pleasures that always please.
A heart that can feel for a neighbor's woe,
And share his joys with a genial glow.
With sympathies large enough to enfold
All men as brothers, is better than gold.

Better than gold is a conscience clear,
Though toiling for bread in a humble sphere,
Doubly blest with content and health,
Untried by the lust of cares or wealth.
Lowly living and lofty thought
Adorn and ennoble a poor man's cot;
For man and morals and Nature's plan
Are the genuine test of a gentleman.

Better than gold is the sweet repose
Of the sons of toil when their labors close.
Better than gold is the poor man's sleep,
And the balm that drops from his slumbers deep,
Bringing sleeping draughts to the downy bed
Where luxury pillows his aching head;
His simpler opiate, labor deems
A shorter road to the land of dreams.

Better than gold is a thinking mind,
That, in the realm of books can find
A treasure surpassing Australian ore,
And live With the great and good of yore.
The sage's lore and the poet's lay,
The glories of empires pass away;
The world's great drama will thus enfold
And yield a pleasure better than gold.

Better than gold is a peaceful home,
Where all the fireside charities come;
The shrine of love and the heaven of life,
Hallowed by mother, or sister, or wife.
However humble the home may be,
Or tried by sorrow, with heaven's decree,
The blessings that never were bought or sold,
And centre here, are better than gold,

A Voice to Young Men.

BY ANNA LINDEN.

Stand nobly up and face life's work
With brave and honest soul,
And let no false and foolish pride
Your manly heart control.
Stand out in honest, bold relief—
A worker and a man;
Something of use in this great world,
After your Maker's plan.

And if you keep your morals pure,
And cultivate your mind,
And stand up nobly for the right,
Anp live as God designed:
Then, sir, you need not bend the knee
To bank stock nor to gold;
For there is wealth of higher worth
Than figures ever told.

Work is most noble, good and grand,
Since God ordained it so:
It keeps the heart from cankering rust
And muses the nation grow.
The workers are the nation's wealth,
And not the idle drones.
Work makes the country prosperons,
Makes happy hearts and homes.

'Tis good to see the honest face
And stalwart, manly frame,
With muscles that bespeak of strength,
And hands to match the same—
Hands that look competent to grasp
And grapple with life's foes,
And cause the barren wilderness
To blossom as the rose.

Ashamed of labor! No, not you,
Since that was God's decree;
For honest and industrious toil
Brings glad prosperity.
It frames and builds up all the good
A nation's life can know—
Science, and art, and fame, and wealth,
From work and effort grow.

Spurn indolence, whose weakening grasp
Blights manliness and worth;
Be something to yourself and friends:
Be useful to the earth.
Make labor noble in itself
By being nobly done,
And make fair Nature's heart rejoice
To own you as her son.

It matters not if hands and brains
Are all your stock of wealth.
With steady, patient industry,
And energy and health,
You yet may rise to lofty heights,
As others have before,
And crown the throne of wealth and fame
With one brave victor more.

Go Ahead.

When your plans of life are clear,
Go ahead;
But no faster than your brains.
Haste is always in the rear.
If Dame Prudence hold the reins,
Go ahead.

Do not ask too broad a test—
Go ahead.
Lagging never clears the right;
When you do your duty best,
You will best know what is right—
Go ahead.

Never doubt a righteous cause,
Go Ahead.
Throw yourself completely in,
Conscience shaping all your laws;
Manfully, through thick and thin,
Go ahead.

Do not ask who will go with you,
Go ahead.
Numbers! spurn the coward's plea!
If there be but one or two—
Single-handed though it be,
Go ahead.

Though before you mountains rise,
Go ahead.
Scale them? certainly you can.
Let them proudly pierce the skies;
What are mountains to a man?
Go ahead.

Though fierce waters round you dash,
Go ahead.
Let no hardship baffle you.
Though the heavens roar and flash,
Sit ll undaunted, firm and true,
Go ahead.

Heed not Mammon's golden bell,
Go ahead.
Make no compromise with sin.
Tell the serpent he looks well,
But you cannot let him in.
Go ahead.

Better days are drawing nigh.
Go ahead,
Meking duty all your pride,
You must prosper, live or die;
For all heaven's on your side,
Go ahead.

Love and Labor.

We die ant all, for our deeds remain,
To crown with honor or mar with stain.
Through endless sequence of years to come
Our lives shall speak though our lips are dumb,

What though we perish unknown to fame,
Our tomb forgotten and lost our name,
Since naught is wasted in heaven or earth,
And nothing dies to which God gives birth.

Though life be joyless and death be cold,
And pleasure pall as the world grows old,
Yet God has granted our hearts relief,
For love and labor can conquer grief.

Love sheds a light on the gloomy way,
And labor hurries the weary day.
Though death be fearful and life be hard,
Yet love and labor shall win reward.

If love can dry up a single tear,
If lifelong labor avail to clear
A single weed from before the true,
Then love and labor have won their due.

What though we mourn, we can comfort pain;
What if we die, so the truth be plain.
A little spark from a high desire
Shall kindle others, and grow a fire.

We are not worthy to work the whole.
We have no strength which may save a soul.
Enough for us if our life begin
Succes.ful struggle with grief and sin.

Labor is mortal and fades away,
But love shall triumph in perfect day;
Labor may wither beneath the sod,
But love lives forever, for love is God.
—[Chambers' Journal

The Bachelor's Advice.

If determined to marry, why so let it be,
But first tarry a moment and listen to me.

To save you some trouble and maybe some strife,
Look well to the woman you choose for a wife.

If ugly the maiden, why let her go in,
And frighten some other less timid than you.

If fair, then beware lest your house should become
The haunt of gallants when you're absent from home.

If poor, let her pass, and all wooing give o'er;
For discord comes in when the wolf's at the door.

If wealthy, avoid her; she'll certainly wear
Those garments that pride should forbid you to spare.

If old, bid the beldame in quiet to go.
A man should not marry his mother, you know.

If young, have a fear of the tempest and storm.
Young hearts are rebellious, young blood is too warm.

If short, ponder long ere you make her your bride;
Who stoops to a mate must abandon his pride.

If tall, drive her off, if 'tis needed with whips.
'Twould fatigue to much to climb to her lips.

If sly, bid her troop to her mother at once,
Lest when you have wedded the world call you dunce.

If frank, to her outspoken speech give no ear;
She may tell you some truths not so pleasant to hear.

But should there be one who is neither of these,
Then win her and wed her as soon as you please.

But first, at the bridal a goblet fill up
With poison, then drain at one swallow the cup.

For thus, and thus only, a man may forego
The evils from marriage that certainly flow.

A Woman's Answer to a Man's Question.

Do you know you have asked for the costliest thing
Ever make by the Hand above—
For a woman's heart and a woman's life
And a woman's wonderful love?

Do you know you have asked for this priceless thing,
As a child might ask for a toy,
Demanding what others have died to win
With the reckless dash of a boy?

You have written my lesson of duty out,
Manlike you have questioned me;
Now stand at the bar of my woman's soul
Until I shall question thee.

You require your mutton shall always be hot,
Your socks and your shirts be whole;
I require your heart to be true as God's stars,
And pure as His heaven your soul.

You require a cook for your mutton and beef;
I require a far better thing.
A seamstress you're wanting for socks and for shirts;
I look for a man and a king.

A king for the beautiful realm called home,
And a man that the Maker, God,
Shall look upon as He did the first,
And say, "It is very good."

I am young and fair, but the rose will fade
From my soft young cheek one day;
Will you love me then, 'mid the falling leaves,
As you did 'mid the bloom of May?

Is your heart an ocean, so strong and deep
I may launch my all on its tide?
A loving woman finds heaven or hell
On the day she is made a bride.

I require all things that are grand and true—
All things that a man should be.
If you give this all, I would stake my life
To be what you demand of me.

If you cannot be this, a laundress and cook
You can hire with little to pay;
But a woman's heart and a woman's life
Are not to be won that way.

The Sower.

BY ROBERT MORRIS, LL. D.

He that hath ears to hear
May listen now.
While I shall tell, in simple words indeed,
Of a good husbandman who took his seed
And went to sow.

Some by the wayside fell
On breezes borne
The fowls of heaven flew down—a greedy train—
And snatched with hasty appetite the grain,
Till all was gone.

Some fell upon a rock,
And greenly soon
They sprouted as for harvest, strong and fair;
But when the summer's sun shone hotly there
They wilted down.

Some fell among the thorns,
A fertile soil;
But ere the grain could raise its timid head,
Luxuriantly the accursed weeds o'erspread
And choked them all.

But some in the good ground—
God's precious mould—
Where sun, breeze, dew and flowers apportioned well,
And in the harvest smiling swains could tell
Their hundred-fold.

A FARMER'S economical daughter in Massachusetts put off her wedding-day because eggs were forty cents a dozen, and it would take two dozen for the wedding-cakes and pudding.

SCIENCE OF CULTIVATION.

There is one question that is of considerable importance in its bearing upon the matter of the best cultivation for our climate, which we would like the opinion of the best philosophers and scientists upon in a practical manner. We feel decided upon it already in our own mind, but see that others differ widely from us. We believe that all questions of science and natural philosophy are as capable of absolute demonstration as are questions in mathematics. But a wrong comprehension and interpretation of facts, and a little false reasoning, will terribly warp one's understanding, even upon questions apparently easily capable of proof conclusive.

As differing in the main from us, we copy below something from the *Record-Union* upon "California's climatic phenomena, considered in reference to agriculture:"

AGRICULTURAL EFFECTS.

"We have stated that the reason why California suffers less from drought, during her long, dry seasons, than most other countries do if they fail to have rain every few weeks, is traceable to the same cause that produces her cold nights—namely, her dry atmosphere. This proposition at first thought, we know seems impossible; but it is nevertheless true, and is accounted for upon simple philosophical principles. We will endeavor to explain it. The temperature of the soil partakes of the temperature of the surrounding atmosphere, and all the heat of the soil comes from the sun through the atmosphere. We have shown that a wet atmosphere retains the heat during the night, while a dry atmosphere becomes cool quickly in the absence of the sun. Is it not plain, then, that the loose worked soil, lying under a damp atmosphere, will become heated to a greater depth during a long warm season than it will when equally loose under a dry atmosphere? and that it will indeed assume much nearer the temperature of the atmosphere itself? Experience proves this to be true. The loose soil in New York, for instance, at a depth of six inches in the month of August indicates the same, or nearly the same temperature as the atmosphere above it, while equally loose soil in California shows three or four degrees lower temperature than the atmosphere above it. Now to this fact apply the well-known atmospheric phenomena of condensation of moisture on a cool surface. Ice-water in an earthen pitcher, on a warm day, even in our dry climate, very quickly causes water to accumulate on the outside of the pitcher from the surrounding atmosphere. So a cool soil, in our hottest days, is constantly condensing and absorbing the moisture from our dry atmosphere, and with this moisture feeding the roots of plants. Hence, if the soil be loose deep down—and the deeper the better, because the greater the difference in temperature between its lower particles and the atmosphere, every particle of that soil presents to the atmosphere a condensing surface, and, like the pitcher, draws from it its moisture. But in the Atlantic States, or any other country where the temperature of the soil becomes equal to that of the atmosphere, there can be no condensation of the soil, and consequently the soil can obtain no moisture from the atmosphere, except the condensation takes place in the atmosphere itself, and falls upon the soil in the form of rain. Hence, the absence of rain for a few weeks brings destructive drought, though the atmosphere may be so moist as to be absolutely oppressive and scalding to the touch. A great many farmers hold to the theory that the moisture in a loose soil comes from below by evaporation. Hence they stir the surface frequently, as they say, to let the moisture come up. This theory incorrect. If it were true that the moisture comes from below, then the harder and more compact the surface the more moisture would be kept in the ground, for the very plain reason that it could not escape through a compact and tight surface as readily as through an open one. The truth is that a compact surface on the soil permits evaporation, but does not present the cool surface to induce condensation as does a loose soil. The atmosphere penetrates a loose soil as deep down as it is loose, and the cool surface it there meets robs it of its moisture, while it cannot penetrate a loose soil to be robbed. A few familiar facts, perhaps, will illustrate the point better than pages of reasoning. Many of our farmers have dug wells in this country in the dry summer months, and have thrown out piles of dry soil, and have been surprised to find, in the course of a day or two, that the dry soil so thrown out had become quite moist; even more moist than the natural surface upon which it was thrown. How came this about? Was it by evaporation from the natural surface below up through the new soil thrown out? This could not be; for if you dig down ten inches in the newly excavated soil it is as dry as when first thrown out, while perhaps four inches down it is damp enough to germinate seed, and frequently does it when seed will not germinate on the natural surface. The fact is, the soil thrown out of the well is cold, and condenses the moisture from the atmosphere."

How it is possible for any one to steer so wide from the mark, or to make such false deductions as are indicated in the above extract is wonderful at least. The idea advanced of condensation of moisture from our dry atmosphere by a loose soil is almost too preposterous to allow of a moment's consideration. This condensation theory, as applied to the soil, is, on general principles, one of the biggest humbugs ever preached; and he who expects to raise a crop from land that depends, for water, upon condensation of moisture from the air will carry his crops away in the corner of his eye, and particularly in a dry climate like ours. Why, the dew point, as indicated by the wet bulb of the thermometer, ranges, in dry weather, from twelve to forty degrees below the temperature of the atmosphere in the shade; and the surface soil, exposed to the rays of the sun, gets heated up, and remains so all through our dry season, several degrees higher than the dew point. Hence, the impossibility of such condensation. The dryer the air the greater the difference between the dew or condensing point and the temperature of the air; and before condensation of moisture can result, the temperature of the soil must be really below the dew point several degrees. The idea of our dry soils, lying under the summer suns of our cloudless climate, condensing moisture from the drying air, reminds us of the saying, "drawing blood from a turnip." The evaporation of all free moisture from the soil into the atmosphere is the natural and inevitable result of contact of the air with the soil, superstitious theories to the contrary or not. And whether the soil is solid or loose, the process of absorbing moisture from the soil goes on just as fast as the conditions will admit. The true policy of cultivation for retaining moisture is to leave the surface soil in the best condition to resist the drying action of sun and atmosphere. This is found, by experience, to be a mulching of loose material, such as straw, leaves, manure, dry earth, etc. If the soil is compact to the very surface, the moisture as it rises from below, by the laws of capillary attraction and equal distribution, is at once licked up by the drying air that comes in contact with the compact surface. Every farmer has noticed how soon such soil will dry off and crack in a dry, windy day. A mulching over such soil would act as a non-conductor of air and moisture and of heat and cold, as our clothes, when made of soft material, do to protect our bodies. A rapid evaporation of moisture from any surface lowers the temperature of that surface. A condensation of moisture, on the contrary, raises the temperature of the surface.

In the Atlantic States in early Summer, when the days are very hot and the air is surcharged with moisture—the dew point being very high—and the soil is cold from the melted snows and frost of winter, there is more or less condensation of moisture from the air by the soil, which at once tends to cool off the air and warm up the soil. But after the soil once becomes heated in July and August, such condensation ceases, even in that moist climate. A mulching to retain the moisture in the soil is as necessary there in midsummer as in California. Moisture does not come from below by "evaporation," as the *Record-Union* expresses it, but by capillary attraction; and instead of the farmer "stirring the soil to let the moisture come up," it comes up itself without stirring, and the farmer stirs the surface to keep the moisture from exposure to the air and sun, and to keep it from escaping readily into the air by evaporation. A stirring of the surface soil makes it loose and dry, but this loose, dry earth acts as a blanket to cover the moist soil beneath and keep it from drying out.

Our best orchardists and gardeners find that a light surface cultivation of not over two inches deep, is the best sort of tillage that they can give to retain moisture and secure the best growth. What our cotemporary says about earth from wells condensing moisture from the air must be a fabrication of the imagination and simply merits a denial.

Sheep and Goats.

MORE FACTS AND FIGURES ABOUT THE ANGORA GOAT.

LUSTER and length of staple are the two qualities which are required in mohair. Mr. Farr, manager of the Holyoke, Mass., Alpaca company, asserts this—It is the luster which gives this hair its chief value. Goods made from it must look bright and glossy to be valuable. And it must have length to be worked advantageously. The same gentleman asserts that hair ten inches long is worth, per pound, more than twice as much as hair five inches. He also asserts that the principal drawback to the California staple is the shortness. The luster is equal to that of the best Turkish mohair. He concludes:

If California farmers can grow the stock to average eight or ten inches long, the success of it as a valuable commodity is certain. We

recently bought a few bales of California mohair and paid 85 cents per pound. It was about seven inches long, and had to be mixed with ordinary combing wool to carry it through, which of course detracts a good deal from the brightness of the goods. Had it been two inches longer, it would have been well worth $1 per pound.

Messrs. Hall & Turner, of the Jamestown, New York, Alpaca Mills, say that they are receiving some very good specimens of goats' hair from breeders on this Coast, and every year expect to see more of high-grade quality.

Mr. C. P. Bailey, of San Jose, who gave us returns of last year's clip from S. Thompson, Nephew and Co., New York, which appeared in July number, has shown us a letter from Messrs. Hall & Turner, containing returns of this years clip, 920 pounds nett, which is as follows :

342 lbs long mohair at 75c.	$256.50
588 " short " " 23c.....	135.24
Total.....	391.74
Freigt on bundle of 1030 lbs.....	27.50
Net.....	364.24

They complain of shortness of staple in California fleeces. This is owing mainly to the fact that many of the goats shorn are not of high breed. When it is remembered that nearly all the flocks of Angora on this Coast were bred up from common ewe goats with Angora bucks, all within a few years, it will be seen that the remedy is in breeding up as fine as posible, with constant selection of pure bucks with the longest staple. In order to produce a long, clear staple of mohair, the goats should be well supplied with pasturage the whole season through. Full feed a part of the time and a few months of short, poor feed will not make a prime staple of mohair, any more than it will of wool. This is a matter of considerable importance. While a goat will keep fat on feed that will barely keep a sheep alive, yet they should be kept in good order the whole year through to grow long, lustrous, strong mohair of first quality. Mr. Bailey has also shown us samples of goods manufactured from mohair, consisting of mohairs, alpacas, poplins, etc., ranging in price from 32 to 82 cents per yard, wholesale. Any one who would examine these would affirm that there must always be a demand for such goods, and it is the demand that will govern the prices to a great degree. The supply cannot for many years lower the prices.

Mr. A. W. Butler, writing upon the "Resources of Monterey County," says of the of the Angora goat :

The process of breeding a good, wool-bearing flock of goats by breeding pure Angora bucks to the common ewes of the country, is indeed a slow one, but those who have persevered are now reaping their reward. California has a large amount of rough mountain land just suitable for goat-raising, and not very valuable for any other purpose. Such pastures cost the breeder very little, and the goats prefer them and keep fatter on these mountain pastures than they do on the more level arable valley lands. In this county the Santa Lucia and Gabilan mountains contain many thousand acres of Government land, suited to the grazing of goats. Here the Angora finds a home very similar to his native home in Angora Bay, Bazare and Constimuni. The progeny of the imported goats raised in this county are generally larger and heavier fleeced than the original imported animals. The work of taking care of the animals is light, as they pick their own living the entire year, and never need feeding. The goat raiser must, however, be at his post during the season for dropping kids, and see that every one is saved, as this is his harvest, but after this is over he can lie back at his ease, and rejoice at his good fortune in having chosen so desirable an undertaking. In a few years the owner of the flock will become independent, his out-door life will give him the best of health, and should ambition prompt him he will be enabled to enter other fields of useful employment. It is doubtful, however if he ever goes into any enterprise that will give him so much satisfaction as the raising of the Angora goats.

As we have spoken of the business so enthusiastically, perhaps a little history of it in this county might not be out of place. Mr. C. P. Baily came to this county eight years ago with a flock of two hundred half-breed ewes and one pair of pure-bred goats (a buck and a doe) and located in the foot-hills of the Salinas Valley, He has now one of the largest, if not the largest, flock of high-grade goats in America, and last year sold $5,000 from his flock. Thomas Butterfield & Son, and Mr. Landrum, of the firm of Landrum & Rogers, came to this county about the same time that Mr. Bailey came, and have both engaged quite largely in importing pure breeds and in raising pure breeds and grades. Thomas Butterfield & Son sold from their flock during the past year over $20,000 worth of stock. Messrs. Landrum & Rogers' sales have been very large, and they now have a very fine flock. There are, perhaps, a dozen smaller flocks in the county that are doing well. Thus far breeders have realized their main profits from the sale of stock, but hereafter they may look for an income from the wool product.

Many have been deterred from going into the business on account of the uncertainty of sale for wool on this continent. For the past one hundred years there has been a steady demand and plenty of purchasers in the London and Liverpool markets, and goats' wool or mohair has brought about three times as much as sheep's wool. The production of goats' wool in this country has created a demand for it here, and now the Jamestown Mill, N. Y., the Riverside Mill, N. Y., and a mill in Philadelphia are ready to buy and work all the good wool that can be produced ; and they will pay from fifty cents to one dollar per pound for it. An establishment has been started recently at San Jose, to tan, dye and manufacture goat skins into robes, coats, etc., and manufactured skins found ready sale at from two and one-half to ten dollars each. With the present outlook, is not here a large field open, inviting the attention of labor from less favored countries?"

The fact of Mr. Bailey selling so many of his high-bred goats accounts for his not shearing more high-grade mohair. The short staple not used by the alpaca mills is sent to the carpet factory and used in making the finest carpets, to give gloss to the white portions. The new tannery and coloring establishment in San Jose, above mentioned, is to be greatly enlarged by a stock company lately formed for the purpose. Messrs. Welch & McCracken will still be the head of the manufactory; but a stock company representing $50,000 has been formed, composed of some of the leading business men of San Jose, incorporated as "The Angora Robe and Glove Company." The design is to enter largely into the business of dressing, tanning and coloring the Angora goat and other skins into robes, mats, furs, gloves, etc. We have spoken of this branch of business before, as one likely to become a most important industry. There is no doubt in our mind that the Angora goat will prove to be one of the most valuable acquisitions to our State. He will draw nourishment from high, rocky hill-tops and waste places, and give a fleece, that for beautiful white may be compared to the water-lily, that draws its life from the mud at the bottom of marshy ponds. But while the lily is simply beautiful, the goat is as full of utility as beauty ; the shining fleece to be woven into fabrics, or used as furs, trimmings, robes, etc., in many ways, and the tanned skins converted into nice gloves, while the meat, which is sweet and wholesome, will furnish food for toiling thousands of people.

Correspondence.

Lompoc Temperance Colony, Santa Barbara County.

Eds. Agriculturist:—I am under promise to write you from this place. I have long intended to redeem my promise, for the benefit of the many readers of your varied, practical and wide-awake paper, but hitherto I have been very busy.

Well, about this much-praised valley. At a distance, I do not doubt, some think it over praised, so much has been said in its favor; but I can simply say, with all my neighbors, that the longer I am here and the more I see of it, the better I like it and the stronger grows my faith in its fertility, its capability of withstanding drought and its future. Had not the soil been so rich and naturally moist, we should have raised nothing, for the Spring had well advanced before most farmers could get to ploughing, not to say planting. This year, too, you remember, the rains ceased very early. Notwithstanding all this you would be astonished to see how vigorous is the growth of corn, beans, potatoes, pumpkins, beets, etc. Experiments with sweet potatoes, flax and tobacco are also very encouraging. Barley is all harvested, most of it being cut for hay. This, with some hundreds of tons of wild oats and clover hay cut from our splendid grazing valley, will fully supply the whole settlement till our abundant grass comes again, which, on this warm, loamy soil, is directly after the first rains. I think we will have enough potatoes, of the very finest quality, both as to size, flavor and freedom from all disease, for home consumption and seed for next year ; but there is not likely to be any surplus, as almost every available acre will be planted next season, so encouraging is the result on the comparatively small scale of this year.

This is a number one valley for all root crops. Grain will grow well enough; but it is rather a question whether the growth of wheat would not be so rank in this moist land and climate as to lodge and rust; yet one man has raised a ten-acre patch of fine, plump wheat. The foot-hills and mesa land will probably be tried pretty largely, as we are to have a grist mill on our mountain stream—the men to build and work it are right here now. On ranches above us they will sow wheat largely. We have abundance of timber and brush. Farmers are already at work clearing a large

area of land for next season. We have also fine land for dairy and hog ranches. Of the former we have two in active operation, and a gentleman from Watsonville has lately purchased land to the value of $6,000 cash for the latter purpose. As we shall be able to ship to San Francisco direct from our own wharf, a large number of hogs will be raised by different parties.

Game is abundant—quail, deer, rabbits and some wild duck. So is wild honey of the purest and sweetest quality. A good deal of building is going on, some residences being large, substantial and tasteful. A neighbor of mine has nearly completed a brick house of good size. We have excellent lime, two kilns supplying the demand. We have also two brick-yards. We have two good schools, attended by nearly one hundred children. We have also Sunday school and preaching regularly by our resident minister, J. W. Webb, late pastor of the Christian Church at Ukiah, formerly of Gilroy, and by Rev. T. D. Lewis, of the M. E. Church, Santa Maria. You will be glad to learn that the temperance sentiment is sound and strong. Besides an active Lodge of Good Templars, we have an open-air temperance meeting in a lovely grove near town on Sunday afternoons, with musical and literary exercises and speeches. We are about to build a good schoolhouse in town. And by the way, the town is a wonderfully healthy infant for only seven months old. It contains three general and one hardware store, a butcher's, a bakery, two harness shops and one printing and newspaper office, the *Lompoc Herald*, a live temperance paper, editor, W. W. Broughton, one of the stirring men of the times, to whom, as much as to any man, this colony owes its existence and prosperity. We have a first-class hotel, well-conducted and thoroughly temperance, two livery stables, a drug store, post office, boot makers, large boarding-house, dress-makers, laundry, Justice of the Peace, Notary Public, a good lawyer—A. E. Hancock, late County Judge of Santa Cruz county—etc., etc. I enclose an article with resolutions passed at our first open temperance meeting. The Grange also passed a strong and plain resolution favoring temperance and the keeping out of saloons. Families are coming in all the time, and many others are writing with a view to coming. Now is the time for intending purchasers, settlers or renters to come to be in good time for cropping, which, in this southern part of the State, is very early. You can plow most of this valley almost any time of the year, and rain is no hindrance except when actually falling heavily. The Company desire only good, sober, energetic men. No one should come without some outfit or means to get it, and at least some capital—a little ready cash is so handy everywhere—although the Company gives ten years in which to pay up. Hoping this will not be too long, I remain truly yours. J. P. Ross.

P. S. I should add that while other places are complaining so of the heat, we are having the most pleasant summer possible, a cool breeze fanning us a part of every day and most refreshing nights.

Again I re-open my letter to say that last night the ladies—a noble band—and gentlemen of Lompoc valley for five miles round, some hundred strong, visited the drug store, convinced that the stock of alcohol was too great for the medicinal need of a healthy temperance colony, and that it was being too freely dispensed for the morals of the community. The liquor was about all poured out before the party left. Every store was then visited but no liquor found. Each proprietor freely promised not to keep even "bitters."

Liquor in the Temperance Colony.

From a private letter from the above correspondent we take the liberty of publishing below what he says about a raid of the women on a graduated liquor shop called a drug store. By the way, similar troubles have occurred in Greeley, Colorado, in that temperance colony. It seems that the sale and use of alcohol as medicine is the loophole where the "devil" can generally crawl in unmolested. When all temperance people learn to discard alcohol as a medicine, and cease to employ physicians who dare recommend or prescribe the abomination, a healthier condition of affairs will exist:

Lompoc has experienced a commotion. You may have read notices of out-door temperance meetings in the *Record*. An old wheel-horse in the temperance cause might readily imagine that there was some secret cause for these meetings.

It had been whispered about that our druggist(a physician) was taking advantage of our by-law prohibiting the sale of intoxicating beverages, excepting upon the written prescription of some physician. He could and had, it was said, prescribed "whiskey straight." So much for that. Many persons attended these meetings and voted to discountenance the sale of liquor and uphold temperance principles generally. Saturday last "forbearance ceased to be a virtue," the following facts, as near as I could learn, being the cause. Mr. and Mrs. Swanton, of the "Swanton House," Pescadero, have an only son who has contracted the habit and appetite for strong drink to such a degree that he had no longer any control over himself. His parents, thinking to place him beyond temptation, sent him and his young wife to Lompoc and set him up in business; but he found means, even here, of indulging his insane appetite. This brought trouble to his wife, who had previously left him on account of his habit, and only consented to return when she saw a chance to live with him in Lompoc free from temptation—a miscarriage, spasms and alarming symptoms generally; but through kind and skillful treatment she had so far recovered as to be free from spasms. During this lull she told her physician that her great suffering was caused by her husband's conduct; that her pains were nothing in comparison with that. She had prayed the Great Father to remove her. The doctor went out to talk to the husband, found him intoxicated, after the talk they both returned to the sick-room, and as soon as Mrs. Swanton saw the condition of her husband she screamed, went into a spasm and died.

The body of this innocent victim of the curse of intemperance was buried Sunday, and on Monday the noble women of Lompoc rose up in might, backed by the men, and waited upon our *druggist*. They first called upon the President and officers of the Company, who headed the crowd and requested the druggist to stop the sale of alcoholic drinks. The druggist refused. The President, Judge Hancock, being a peace-officer, retired, and the women took the matter in hand and proceeded to turn out all the liquor they could find. They rolled out a barrel of whiskey and knocked the head in. Demijohns were turned upside down, bottles passed out to the crowd and broken, and soon the floor was swimming with the vile stuff. From the drug-store they went to all the grocery stores and requested the proprietors to desist from selling all liquors, including all patent bitters in vogue. Every storekeeper promised, and the ladies then paid their respects to an Italian, a former resident of San Jose, Mr. Molenaiy, who keeps quite a quantity of California wine. His place is one mile from town. He also made satisfactory promises, and the crowd dispersed.

Yours, J. P. Ross.

I think more of Lompoc than ever.

A Tip-top Letter from the Santa Cruz Mouetains.

Eds. California Agriculturitt and Live Stock Journal: We are now reaping the pecuniary benefits of one of the most favored fruit-growing localities of favored California. We have not only an abundant crop, but a ready market at highly remunerative prices, with little to pay for freight or commissions to middle men. I said one of the most favored—perhaps I might truly say the most favored. For twenty years we have seen no failure in good crops of apples, peaches, plums, grapes and gooseberries, and but one failure of cherries. This year, when failure is so common, we can add to our list apricots, almonds and currants. The late rain is doing wonders for our last Spring's planting of plums and prunes. I have never seen a finer growth. From long experience, we are making the growing of table grapes, plums, prunes, peaches and late-keeping apples a specialty. To these I have added the breeding of the Angora goat to utilize my brush and timber land. They are thriving finely, with but little care except in kidding time.

Our climate as a place of residence is well attested by the number of persons from your valley and other parts who seek to get a sniff at it during the Summer.

I fear your report of the doings of the Agricultural Society will arouse as much of a hornet's nest as did your attack on the whis key ring. L. J. Burrell,

Mountain Home, August 15th, 1875.

A Permanent Whitewash.—Take half a bushel of unslaked lime. Slake it with boiling water, covering it during the process to keep in the steam. Strain the liquid through a fine seive and add to it a peck of salt previously well dissolved in warm water, three pounds of ground rice boiled to a thin paste, and stir in when boiling hot half a pound of powdered Spanish whiting and a pound of clean glue which had been previously dissolved; add five gallons of hot water to the mixture, stir it well and let it stand a few days covered from the dirt. It should be put on hot.

Whitewash for Indoors.—The following recipe for indoor whitewash has been thoroughly tried and said to answer the purpose better than anything else yet tried. The quantities are for a house of eight rooms, and we get it from an old number of the *American Agriculturist:*

"About 33 lbs. Paris white and one lb. best white glue are needed. Dissolve the glue in hot water. Also make a thick wash with Paris white and hot water, and add the dissolved glue and sufficient water to make the wash of the proper consistency. As the mass stiffens over night, warm or add hot water to make it limpid. The Paris white is chalk cleansed from its impurities, and is only a very pure whiting—better than is ordinarily used for making putty. We use the Cooper glue, which is considered the best here, but any good white glue will answer. It costs here 50 cents per pound at retail, and the Paris white three cents per pound. Both articles can be obtained in almost every city or village."

The above makes an excellent whitewash, clean and white and not easily rubbed off. Its first cost is more than lime wash, but it is durable and for nice rooms it is far preferable.

Domestic.

The Perplexed Housekeeper.

WISH I had a dozen pairs
Of hands this very minute;
I'd soon put all these things to rights—
The very deuce is in it.

Here's a big washing to be done,
One pair of hands to do it.
Sheets, shirts and stockings, coats and pants,
How will I e'er get through it?

Dinner to get for six or more,
No loaf left o'er from Sunday,
And baby cross as he can live,
He's always so on Monday.

And there's the cream—'tis getting sour
And must forthwith be churning;
And here's Bob wants a button on—
Which way shall I be turning!

'Tis time the meat was in the pot,
The bread was worked for baking,
The clothes were taken from the boil—
Oh, dear! the baby's waking.

Hush, baby dear! there, hush-sh-sh!
I wish he'd sleep a little,
Till I could run and get some wood
To hurry up that kettle.

Oh, dear! if P——— comes home
And finds things in this pother,
He'll just begin and tell me all
About his sainted mother.

How nice her kitchen used to be,
Her dinner always ready
Exactly when the noon-bell rang—
Hush, hush, dear little Freddy!

And then will come some hasty word,
Right out before I'm thinking;
They say that hasty words from wives
Set sober men to drinking.

Now, isn't that a great idea,
That men should take to sinning
Because a weary, half-sick wife
Can't always smile so winning?

When I was young I used to earn
My living without trouble,
Had cloths a-nd pocket-money, too,
And leisure hours double.

I never dreamed of such a fate,
When I, A LASS! was courted—
Wife, mother, nurse, seamstress, cook housekeeper,
chambermaid, laundress, dairy-woman and
scrub generally, doing the work of six,
For the sake of being supported!

Chats With Farmers' Wives and Daughters---No. 9.

BY "JEWELL."

"*Dear 'Jewell!*' A reader and admirer of your 'Chats' asks the privilege of saying to you that her eyes filled with tears of gratitude on reading your article in the August number of the Agriculturist, telling husbands that their faithful, toiling wives de*serve* praise as much as their fine grain-cutters; and oh! how much more they *need* the cheering words. Being an old maid does not make me ignorant of the fact, that many a weary woman, with finest instincts alive to wifely duty, and heart filled with warm mother love and anxious care, drags her heavy footsteps from year to year without one-fourth the pecuniary reward that would be given to Bridget, and with not one-tenth the loving words and affectionate caresses that would be voluntarily bestowed on the trotter that had won for his owner a purse of gold on the race-course.

Just at my elbow sits a wife and mother who says she hopes your appeal will catch the attention of her husband, who never seems to think his wife is dishonestly treated, if after a hard day's work she has not one penny reward or even one kindly word given her; and if the hungry, waiting heart forces the lips to say, 'have I not done well to-day? and if so, why do you not, at least, stroke my head in praising, as you would not forget or neglect to do to your pointer if he had brought you a bit of game?' he replies loftily, 'oh, your reward ought to be the consciousness that you have done your duty!' and no doubt he congratulates himself that he has done his duty when he has given her this piece of wonderful information. And this woman is loving and lovable, and could fill her home with blessing and sunshine; but years of ceaseless household cares, with never a day for rest or recreation, never a loving word or approving smile to strengthen her tired spirits, have well-nigh robbed her of all ambition to be anything more than an unpaid servant. I know half a score of good women right in the block where I live, all wearing this same tired, disappointed look, who would be bright happy wives only for this selfishness on the part of their husbands. Men may consider these little attentions trifles, but with the majority of married women they make up the sum of life, for no good woman's heart, after she becomes a wife, can ever again go out into the world for the thousand little satisfying things which she considered so necessary for her happiness when she was a maiden. If she finds them not in her own little world at home, then she must go hungry, for she has chosen this one man from all the world."

ESMERALDA.

I have taken the liberty of using "Esmeralda's" letter as a text to my chats this month, although it may have been written to me privately, feeling the truth of what she says about a husband's thoughtlessness in regard to showing due appreciation of his wife. It is perhaps natural to both husband and wife to neglect those little attentions that make the honeymoon so charming, when real life has come upon them with its manifold duties and perplexities, but let us wives be sure that it is not *our* fault, by losing no opportunity of giving a kind word or a caress; even if there be no responses, it will keep alive that spark which dies without a little fanning, and is as pleasant to the husband as the wife. Let me draw a picture I once saw when on a visit to a friend: A wife, with unkempt hair, no collar, slipshod slippers and in a hurry getting breakfast, children to dress, buttons off husband's shirt and things going wrong generally, breakfast late, toast burned, coffee muddy, etc., husband hurries off without a parting salute to any one, even the crowing baby is forgotten. And no wonder—an important appointment was broken and his business suffered in consequence of being forty minutes behind time. And yet that wife told me, in confidence and tears, that her husband neglected her, and she felt that his love was colder than of yore—saying, "how long would it take him, I'd like to know, to kiss us good-bys?" I felt and told her, that kisses must be spontaneous to be worth much and not forced from a sense of duty; and who could feel like caressing when in a hurry, with mind harassed and temper ruffled, with surely not so attractive an object to call it forth as she used to be during the first months of married life, when fewer duties devolved upon her, no babies to disturb at night or hurry her in the morning, and, with hair and temper unruffled she bid her new husband goodbye with a smile and he with a kiss. Oh, wives! let us try and keep the love of our husbands and blame ourselves if it grows cold; for as our duties multiply and call our utmost capacity and energy into play, do we not neglect much that would elevate and give pleasure to husbands who also have a "hard road to travel," many of them, and as expenses double, so do their cares also. To bear and forbear is the true way to live harmoniously and truly happy. And one word of advice—try always to keep the respect of our husbands and the love will follow; which is equally applicable to husbands. I hope to hear from the other sex on this subject, and as it is one of vital importance, the views of both sexes should be brought out to show how best to make married life a "success," as so many predict it a failure in this age.

PLUM LEATHER.

Although this season does not promise much waste fruit, still those on fruit farms often have more of a kind than they can well attend to. If plums, I would let them make *plum leather* of the pulp, which is very convenient for pies or sauce in winter. Wash the fruit and put in a large pan on the stove until heated through, or if very ripe and soft mash through a colander, and spread on clean boards to dry in the sun, covering with netting to keep off the flies and insects. Two days will dry it, when, with a knife to lift up the edges, you can roll it up and put in paper bags to keep flies out. To use it, wash and soak in water a few minutes only and it is ready. Made of peaches it is excellent; of plums is very good but sour.

COOLING DRINKS.

This is the season when cooling drinks are very acceptable. To my mind there is nothing equal to citric acid, which can be kept dissolved, and with sugar and a little oil of lemon you would find a cheap and easily-made lemonade, always ready and palatable. Citric acid being the acid of lemons, it is equally healthful in fevers and bilious complaints. Of late the drug doctors prescribe it in rheumatism.

Here are some recipes from my choice selection:

HOW TO MAKE AN INDIAN APPLE PUDDING.

Turn three pints of scalding milk into a pint of sifted Indian meal; stir in two large spoonfuls of sugar, two teaspoonfuls of cinnamon or ginger, a teaspoonful of salt, one teaspoonful of soda and one dozen sweet apples, pared cored and sliced thin. Bake three hours. The apples will form a nice, sweet jelly. To be eaten with nice syrup of any kind, or is good without any addition.

TO PREVENT LAMP CHIMNEYS FROM CRACKING.

Put the chimneys in a kettle of cold water and heat gradually until the water boils, and let it cool as gradually. As the heat from the lamp flame becomes more or less intense, the chimneys will expand and contract without causing them to break or crack.

TO REMOVE MILDEW.

The following from an English journal will often prove effectual: Make a very weak solution of chloride of lime in water (about a heaped-up teaspoonful to a quart of water),

strain it carefully and dip the spot on the garment into it, and if the mildew does not disappear immediately, lay it in the sun for a few minutes or dip it again into the lime-water. The work is effectually and speedily done and the chloride of lime neither rots the cloth nor removes the delicate colors when sufficiently diluted and the articles rinsed afterwards in clear water.

I clip the following from the *Country Gentleman*, and know them good:

CANNING TOMATOES.

Skin them carefully by pouring boiling water over them; boil twenty minutes in a porcelain kettle, then take out all the water that stands on the top (or if preferred thin only drain off a little of it). Have the jars heated by rolling them in boiling water; fill to overflowing with the boiling tomatoes and seal quickly. I use Mason's jars with glass lids and think them preferable to those with metal tops on account of the acid in the tomatoes. Mine last season were pronounced a perfect success. Keep in a dry, cool cellar.

This receipt is for glass cans; if tin, the wet towel may of course be omitted: Select nice large fruit, pare carefully without scalding, cut away all defective parts and place in a preserving kettle over a hot fire. Have the cans thoroughly cleansed and rinsed, and as soon as the tomatoes come to a boil place a towel slightly wrung from cold water on a tin plate on the stove hearth; set a can on the towel and fill with the hot tomatoes, being careful to keep the fruit as whole as possible. Press the fruit into the can, and when full put in hot juice till it will hold no more. Seal, wipe off the can and set it aside. When all the cans are cold put them in a cool, dark place. Ours are kept in the pantry.

APPLE DUMPLINGS.

Procure good sour apples, pare and core, leaving them in halves. Get all your ingredients—sugar, soda, sour milk, cream, salt, flour and apples. Now make dough as for soda biscuit, only adding a little more cream to make it shorter. Take a bit of dough out on the kneading board, and after kneading roll this as for pie crust. Then cut in pieces long enough to cove an apple, allowing for lapping the eages. Put in two of your apple halves, sweeten according to taste and cover apple and sugar with dough. Lay the dumplings in your bread pan the smooth side up, first having your pan well-buttered. Proceed in this manner until you get your pan well filled (be sure it is a large-sized pan for they will go off like hot cakes), then place a small bit of butter on the top of each dumpling, sprinkle a handful of sugar over all, then place in a moderate even and allow them to bake one hour. Serve, not too hot, with pudding sauce or with cream and sugar.

Familiar Talks---No. 3.

BY "SNIP."

I think "Jewell" is doing very well with her bread-making. I made bread every week for more than a year before I could feel sure that when the batter was mixed it would turn out good, sweet loaves. Of course every one offered a receipt and advice, but in this, as in everything else, experience is the best teacher. We are very fond of

LIGHT-BREAD ROLLS

or biscuits, as they are sometimes called. Following is the manner in which I make them always, and we think they are delicious: I mix the batter as for bread (if I wish to bake bread the same day I take a piece of the sponge) about seven o'clock in the morning. By ten it is ready to knead out. I repeat this kneading as often as the sponge becomes perfectly light. When ready to mould it into rolls I knead in a little white sugar to counteract any acidity that might have been formed by the long standing and a little butter for shortening.

CARE OF CARPETS.

"Nell Van" gives a suggestion for making carpets last longer than they usually do. I think sweeping wears out carpets faster than walking upon them does, unless, indeed, one has a house full of romping boys. Sweeping is hard work anyhow, and I do no more of it than is necessary. I have found that one way to save a great deal of labor in this direction is to have a

SCRAP-BOX.

Mine is a square tea-box such as can be procured at any grocery store. This box I keep under my sewing-table, and it catches all the scraps, threads and the like that would fall on the floor. It is convenient to place by the sewing-machine when you are at work there.

I notice that "Jewell" is allowed to ramble in her letters, so perhaps, Mr. Editor, you will allow me to do the same, and tell you that the extract from the *Rural New Yorker*, concerning the

USE OF SULPHUR

as a remedy for and preventive of vermin on chickens, has made one corner of my brain feel slightly muddled. I have tried it in every way that has been recommended without the least sign of success. Not only this, but I have tried everything that I could hear of. Have had the whole place smoked, washed, whitewashed, and have had the chickens, little and big, greased; but in spite of everything the vermin is there and seems determined to stay. Can any one tell me what is the matter, and how I shall get rid of the pest?

Why He Wants the Agriculturist and Live Stock Journal.

Elder J. W. Webb, of Lompoc writes as follows:

Stray copies of your journal have come into my house, and I wish it sent to my address regularly for three good seasons, viz:

1. I like it for its information—it is worth the money.

2. I see even my little girls "go for it," and it has a wholesome ring about it that will do them good.

3. It is not afraid to speak for temperance, that so much-needed reform; and as a man, a father, a minister, a teacher and a granger, I feel bound to support just such a paper.

Dear Uncle Ben:—I heard you want to have us write to you. I am a little girl seven years old, going on eight. I live in the country. Genie and I hunt eggs now. One day we got five dozen. We found a nest with six kittens in it, so fat and sweet. I help wash dishes and wipe them and I braided a mat. I read in the Second Reader. I have a kitchen and a little stove, a small set of dishes and a little towel. I have a big flag and so has my brother Freddy. It is taller than myself and nearly twice as big as Freddy.

GEORGIE JEWELL.

The simplest and best paint to prevent buried wood from decaying is made of boiled linseed oil and coal tar, into which charcoal is stirred until the whole is of proper consistency. Apply with an ordinary paint-brush.

Boys and Girls.

Minnie Tries to be a Lady.

A TRUE STOTY BY NELL VAN.

MAMMA'S HAT AND POLONAISE.

MINNIE'S mamma had been out to ride in the Park with old Mrs. Le Brun, and when she came home she found a friend in the parlor awaiting her return. Laying aside her hat and walking suit, she went in to her guest, while little Minnie, who had been feeling very unhappy at being left at home, resolved in her mind that she, too, would go pleasuring.

"Little girls love to go riding as well as big ladies," said she; "and I mean to go to Woodward's Garden and see the monkeys and walk among the trees and have a good time. Mamma has left her things on the bed, and I think I'll look just like a lady with them on, so that I can go just as well alone as with somebody."

She put mamma's polonaise on over her own, and it was not long enough to quite drag on the floor; then she put on the hat and feathers and surveyed herself in the glass.

"Oh, how fine I do look! now I'll do; but first I'll scent myself with her perfume. Mamma always puts it on her face and hands to make her smell nice when she goes out."

She was soon ready; then slipping out the front door she stopped a street car going to Woodward's Garden and was soon whirling along past the city houses. There were several ladies and two men in the car. They wondered at the querr little figure who stepped in so daintily and seated herself so demurely, but it was not till they reached Woodward's that it was known that the child had no money, for the lady who sat next her had paid her fare to the conductor and had been more amused than the rest at Miss Minnie's affected ways. Thinking, however, that the child must have some friend in the vicinity of the garden whom she had been allowed to go to visit, she asked her no questions.

When the cars stopped out stepped Minnie, and mincing up to the entrance she attempted to pass in, when she felt herself roughly handled by a man with a big star on his coat front. "Here, my little miss, where are you going? where's your nurse? Don't you know

you cannot come in here alone without money ?"

Alas ! Minnie had forgotten, or was too young to understand, that money is power, and is more necessary to make one's way through the world than anything else.

She was asked where her home was and led to the returning car and sent back to town. Heart-broken and almost crying aloud, the little girl sadly took her seat and forgot all about her fine clothes in her disappointment at not being allowed admittance into her favorite resort, Woodward's Gardens.

The car soon passed the corner where Minnie lived, and the kind conductor let her out and smiled at the child's frankness in acknowledging that she had no money or car ticket. She stepped down and sheepishly slipped into the house by the side gate. She found the house in an uproar because Minnie was gone, and when mamma espied the little figure entering the dining-room decked out in borrowed finery, in spite of her anxiety and annoyance, she threw herself backwards upon the lounge and clasping her hands laughed outright.

Minnie stood on the threshold looking from her mamma to nurse and then to the cook, and never ventured to smile. Then, turning on her heel, she fled upstairs, muttering to herself, "cheated out of it this time, but the first chance I get I'm going again, but I'll take her purse next time and then nobody'll know that I aint a lady; so there!"

Letters From the Young Folks.

Dear Uncle Ben:—Are you truly Uncle Ben to all the boys and girls whose fathers and mothers take the Agriculturist? but you can't be Uncle Ben to everybody, I guess, for Johnny, a boy I know, says his Uncle Ned is not uncle to anybody but him. I would not be so mean if I was he, would you? And what for do you ask us children to write you a letter ? is it because you like children? Haven't you got any of your own? If you had I guess you would not care for any one else's to bother you. I cannot write very good but mamma says I'm a master hand at asking questions, and tire her out. How can I help it, I should like to know. If folks didn't ask questions how could they ever know things that don't come in books. I should never know anything, I do believe, for I do not love to read very much. I suppose that is because I always have to stop and spell the big words, and that makes me forget what it was all about. I don't know how to write letters to anybody; but once our girl got sister to write a letter to her mother in Ireland and told her just what to say, and it began this way—"I now take my pen in hand to write to you." I thought that a funny way to begin. Of course a body knows that a letter written in ink must be written with a pen in the hand.

But I forgot what I was going to tell you when I commenced this letter. First, I want to tell you about a little girl I know named Fanny, who has a little brother Jim. One day they went out somewhere with their papa and saw a little tiny man who was just like a small boy dressed up in little men's clothes. When Fanny came home she told her mother about him like this: "And he had a little coat and vest, and a little watch and chain, and he had a little cane and a little stove-pipe hat, and little boots and a little great coat, and a cigar in his mouth. He was *such* a funny little man!" Then Jimmy came up and said, "and he had a itty toat, and he had itty pants, and he had itty boots on his feet, and he had a itty tane, and he had a itty hat on top of his head, and a *stove-pipe in his mouf;* such a funny itty man, Mamma!" How everybody laughed! I mean to get Fanny to write to you some day, and tell you about her little brother who makes us laugh so much.

I wonder if you are tall and slim, with black beard like a shoebrush under your nose. Maybe you are like Grandpa, without any hair on your head or face except behind your ears. I wish I could see you, for I do believe you are real jolly and laugh all over when you hear anything funny. I like jolly folks who don't be cross to children. I often wonder if some folks ever were little boys and girls, they are so cross to little folks now. But there's the dinner-bell so I must run. Pa says we must never be late to dinner, so goodbye. From your niece you've never seen,

Gerty W.

Dear Uncle Ben:—I thought I would write you a few lines about my home in Santa Maria Valley and what we are doing. At present I am out on vacation. I stay at home and mother and I run the ranch while father is off with his thresher.

It would make you laugh to see me get on the old mule to drive in the cows. We milk eleven night and morning. But the funniest part of all is to see me shoot gophers. The first time I ever shot off a gun I saw an old gopher right in the middle of my flower-garden. I went to the house and got the gun and got all ready to shoot, when I thought it might kick me over like it did father once; but then I did not care much, so I shut both my eyes, commenced to shake, pulled the trigger and shot the gopher. That gave me courage to "try, try again," and I can shoot them every time now.

We have a few horses, cows, sheep and hogs which are all pets. When we go in the field where they are they all come to us to be petted. Sometimes we will take no notice of them just to see the fun. Then the horses will commence to pull our clothes, the cows will rub around and the sheep pull at our fingers, and they will keep it up till we pet them.

We have a nice school-house down here, and have good times when we go to school. We have a paper in school. It is called the Youth's Assistance and all the scholars write for it.

And now, Uncle Ben, you must please excuse bad writing, for although I am fourteen I have not had the advantages of school that city girls have had, and I know I am a very poor writer.

If Jewell had not had so many receipts for making bread I should have sent her one, for I can make good bread.

Next month I hope my letter will be more interesting, for I will have more time.

Ella.

Dear Uncle Ben:—I heard the folks say you would like little boys and girls to send you letters to put in print in the Agriculturist. I have to herd the cattle in the field. We have fourteen cattle and I have got a little saddle to ride with. I know two girls that are afraid of a hen, but I am not a coward. I can ride on horsebrck. We have got a little kitten that climbs up on our clothes. I have got a little writing-desk, and I am in the little spelling-class. I have a little looking-glass, too. At school I study pretty hard and never play. I have a tin water-cart and I play with the greyhound. We have a barn full of hay and the hens lay eggs in it. Goodbye.

Eugene Woodhams.

Stock Breeder.

The Leading Breeds of Cattle.

BEEF BREEDS—THE SHORT-HORNS.

It is unnecesary to give any detailed account of the origin and history of these celebrated cattle. Wherever beef is consumed—and where is it not?—they have played an important part in supplying the wants of man. They are known from one end of the country to the other as the Royal Family among cattle; and no breed dares dispute with them their merited position at the head of the list. The Short-horn has been termed the rich man's breed; and at present prices the "fancy" of his kind could hardly become the property of a poor man without bankrupting him. There is a mania just now for Dukes and Duchesses, and matter-of-fact farmers are disposed to discover something fishy about the immense prices realized, at recent sales for members of this family.

There is no reason, however, why we should mark a man a fool because, for reasons best known to himself, he chooses to invest a large sum of money in a small amount of beef. He may have lights before him which have not shone upon us; and although we may not choose to go and do likewise, we have no special interest in the matter, and can act upon our own instincts. We cannot indulge ourselves in such expensive luxuries as Duchesses and Dukes; but we can, at a small outlay, replace every scrub bull that ranges the prairies with a well-bred yearling or two-year-old Short-horn. That will commence the era of reform from the time he steps among the herd.

The natural home of the Short-horn is on the rich grass lands of the West. Here he thrives amazingly. At two years old he has so waxed in strength and fatness that he is prepared for the shambles, when the scrub-stock of the country is lingering between beef and veal. That is what we want—aptitude to carry flesh and early maturity. Without these no man can raise beef at a profit.

The modern Short-horn is not a milker, although descended from the most noted dairy cows of the last century. Breeders have so entirely lost sight of the dairy qualities of the animal in the effort to secure symmetry of form and a propensity to fatten, that it is now customary, among many of them, to "nurse" their calves on cows kept for the purpose, the mother not being able to afford sufficient nourishment. These, however, are fancy notions which are not expected to meet with much favor on the prairies; and bulls selected as breeders for the farmers "out West," would seldom have time to brush up for exhibition at the fairs, and the dams of their young ones would have no difficulty in suckling them, being neither of aristocratic lineage or delicate constitutions. The grazing portions of the State should be well-supplied with good Durham blood; and if it could be gradually accomplished without too violent an interference with the rights of individuals, we would favor the castration of all the little pestiferous, ill-shapen Texas bulls that dare attempt to repeat themselves.

HEREFORDS,

As their name indicates, came from Herefordshire, England, and are the only prominent rivals of the Shorthorns in size and aptitude to carry flesh. They are a large, long-horned cattle of peculiar color, white about the face, belly and legs, the rest of the body being bright red. They have not succeeded in exciting much enthusiasm in the United States, though recent sales show that small herds have been carried as far west as Colorado and seem to meet with favor. Their admirers give statistics to show that they have, in many instances, competed successfully in the

same rings with short-horns at English fairs, and the small amount of food they require to keep in good condition and their grazing qualities are urged as reasons for their more especially answering the wants of the practical farmer and grazier. Our experience or knowledge in regard to Herefords amounts to little or nothing. It has sometimes been said that they would keep fat where a Short-horn would starve and a Devon grow thin; and we are told by a gentleman who has bred all three, that from his experience, he has no reason to doubt the truth of the assertion.

DEVONS.

We consider the Devon as occupying the same relative position among cattle that the Southdown does among sheep. He is the hardy, active, square-bodied, compact little beast that stands between the giants and the pigmies, requiring little nursing and able to take care of himself, and yielding, yearly an ample return for all the food he consumes. They are of a dark red color, with wide-spreading, straight horns, breed and mature earlier than the larger kinds of cattle, and are particularly desirable on poor pasture lands, where activity is necessary to enable an animal to earn his daily food. Their flesh is said to be superior for beef, the lean and fat being well-mixed; and they frequently enter the lists in England in competition with Short-horns and Herefords, and carry off their share of the prizes.

There are many other kinds of English cattle more or less esteemed, such as the West Highlanders, Polled Galloways and Sussex; but few of these have found their way to America, and do not stand in the front rank with those already mentioned.

DAIRY BREEDS—THE HOLSTEIN OR DUTCH COW.

Although there seems to be some difference of opinion existing between the breeders of this stock in the United States upon the subject, there is no doubt that it originated in North Holland, and that most of the animals known as Holsteins were imported from that section of country. This breed has long been famous for its milk-producing powers, and some of the accounts which come to us of their performances at the pail border upon the marvelous. They consume large quantities of food and carry little flesh when in milk. When dry, it is said, they lay on fat with rare rapidity, and for this reason should exactly suit the milk dairyman, who buys his cows in milk and sells them, when dry, to the butcher. The Holsteins are large, well-turned cows, with crumpled horns of medium length, large udders, and are usually black and white in color. The number of Holstein breeders in the United States is comparatively small. It is only of late years that much attention has been given to this useful kind of dairy animals, but if all we hear of them be true, the time is not far distant when they will become the most popular and generally distributed milk cattle in the country. A Herd Book for the record of Holstein pedigrees is published under the auspices of the Association of Breeders, in Massachusetts. Should any of our readers desire further information on the subject, they can obtain it by addressing W. W. Cheney, of Belmont, Massachusetts, the President of the Association.

AYRSHIRES.

The Ayrshire, if not the best dairy cow, is certainly the most fashionable and popular just now. She is the result of intelligent breeding, long continued in the noted dairy district of Ayr, Scotland, and it is claimed that her milk will produce more cheese to the pound than that of any other breed of cows. The quantity, of course, varies with circumstances; but all things being equal, her admirers assert, with show of reason, that she will yield more milk to the amount of food consumed than any of her rivals. Ayrshires are medium-sized, wedge-shaped cattle, ordinarily red or brown and white, with fine heads, upright horns slightly curving in, and broad, straight backs. Their udders should be square, running well forward, and teats set widely apart. The shortness of the teats has been frequently urged as a strong objection to the breed; a defect, however, which would not amount to much if the flow of milk is constant and in sufficient quantities. Ayrshire steers fatten readily and make good beef. While not prepared to compete with Shorthorns or Herefords, they command good prices in the market and make a fair return for what they consume. An Ayrshire cross upon native stock would result in decided improvement, and when the prodnce is intended for general purposes we would highly recommend it.

JERSEYS OR ALDERNEYS.

It has not been very long since, when, to have advertised the merits of these little animals whose distinctive name we have just written would have secured a laugh of derision from an audience of western breeders. Alderney was synonymous then, and is still to a certain extent, with self-satisfied, would-be wiseacres, with everything little and ill-shapen and scrubby in the cattle line. "Them little yaller cattle," as they are derisively termed, have nevertheless, by dint of sheer merit, pursued their way along the line of emigration till individuals of the breed are owned and esteemed from the Atlantic to the Pacific.

The Jersey is small, bony and active. She varies in color from almost black to brown, gray, fawn and light red, these colors being variously mixed with white in various animals. She is hardy, very prolific and matures early. She is noted for a deep yellow skin and stands unrivaled as the butter-maker of her kind. Jersey bulls crossed upon native cows produce the best family cows, all things considered, to be had. They grade up rapidly, and it is frequently difficult to detect any difference between a half or three-quarters bred animal and a thoroughbred. As "little" and as "yaller" as they are, they admit of no rivalry in their chosen sphere. They have generally been derided by beef breeders since time immemorial for their inaptitude to carry flesh, a high recommendation to any one who has studied intelligently the characteristics of good dairy cows. By some the Jersey has been compared to a goat, who gives a quart of rich milk and is otherwise good for nothing—a quart of rich milk is better than a quart of blue milk, at any rate—but a little enquiry will satisfy the most incredulous that modern Jerseys not only produce an unequaled quantity and quality of butter, but that their flow of milk is quite as large as that of the other breeds, in comparison with their size and the amount of food they consume. A recent letter from B. F. Johnston, the old and reliable correspondent of the *Country Gentleman*,, calls attention to the fact that Jersey milk is, more than that of any other breed of cows, devoid of casine, the most indigestible ingredient of milk. He draws from this fact the conclusion that for the use of families, and especially of children, it should be preferred to all others. In the vicinity of large cities, towns and villages, wherever the great desideratum is a fair quantity of rich milk at little cost, the Jersey cow will "pay." The grades, as already said, are excellent family cows, and are fast superseding natives where their good qualities are known and appreciated. It is as well to state here as elsewhere, that in breeding cattle we must set aside partialities and fancies and secure what we know will answer our wants, without regard to the opinions, so strenuously asserted, of men who have run in their ruts till they can't see over the sides. It would be asking too much to expect a grazier or butcher to admire a Jersey, as it would be to expect a dairyman to look for his milk supply from a Texas steer. It is well to remember that animals bred for special purposes are more apt to accomplish special ends—jacks of all trades are good for none. The Jerseys, Alderneys and Guernseys differ in no material respect. They are the same race of cattle, coming from the three islands, Jersey, Alderney and Guernsey, as indicated by their names. By far the greater proportion of these cattle in the United States hail from Jersey; in fact, the American Jersey cattle club, by whom the matter of pedigrees is regulated, will admit none that cannot be traced back to animals imported from that island.

SWISS CATTLE.

The cows of Switzerland have long been noted for their superior dairy qualities, and have, in a few instances, found liberal admirers who have imported them to this country in small numbers. Several fine herds are owned in New England, and judging from the soil and climate of their native country, we should consider them particularly well adapted to that part of the United States. Our information concerning their success in America is limited, for the reason that their owners have taken no pains to make the public acquainted with their merits. They should be profitable in the broken and rather mountainous sections of this State.—*Missouri Agricultural Report*, 1874.

Live Stock at the Centennial.

It is understood that the Centennial Commission has concluded to have the live stock display at the International Exhibition within the months of September and October, 1876, the period devoted to each class and family being fifteen days and the division as follows:

Horses, mules and asses, as one class, from September first to fifteenth.

Horned cattle, of all varieties, from September twentieth to October fifth.

Sheep, swine and goats, as one class, from October tenth to twenty-fifth.

Poultry will be exhibited as a permanent, and also as a temporary show, the first commencing on the opening of the Exhibition, the latter from October twenty-fifth to November tenth.

Animals must be of pure blood to be qualified for admission (trotting stock and fat cattle excepted), and even those of pure blood must be highly meritorious.

The exhibition being open to the whole world, it is of the first importance that we bring forward the best of their kind only, as the character of our stock will be judged by the general average of those exhibited.

Exhibitors will be expected to provide for feeding their stock.

All forage and other food will be furnished at cost prices at depots conveniently located within the grounds.

Exhibitors will also be expected to furnish their own attendants, on whom all responsibility of the case of feeding watering and cleaning the animals, and also of cleaning the stalls, will rest.

Though the Commission will erect ample accommodation for the exhibition and protection of live stock, contributors who may desire to make special arrangements for the display of their stock will be afforded facilities at their own cost.

All animals will be under the supervision of a veterinary surgeon, who will examine them before admission to guard against infection, and who will also make a daily inspection and report.

In case of sickness the animal will be removed to a suitable enclosure, specially prepared for its comfort and medical treatment.

Rings will be provided for the display and exercise of horses and cattle.

It is highly important that all who design exhibiting should now make application, as the extent of preparation necessary can only be regulated by an estimate based upon actual demands.

Inquiries may be addressed to the Chief of the Bureau of Agriculture, Philadelpeia.

Porcine.

Hog Raising.

WHEN properly managed, there is no more profitable stock business in this State than raising hogs for pork. Hogs increase here much faster than any other class of stock. Sows will breed on an average twice a year, and after they are one year old will average from six to ten pigs at a litter. At a year old these pigs are ready for the market, and are always in demand. Indeed, there is no day in the year when there is not ready sale for good porkers. The Chinese always eat and will always have pork. Pork is also worth more in proportion to the cost of production than any other meat. Hogs in this State will live the year round by grazing, and do well at that. Alfalfa is the best grass or clover for hogs. They will reject all other grasses or clover for alfalfa, and will thrive on it from the time they are two months old. The sows will give a good supply of milk for pigs on this clover alone, and keep in good condition. At one year old good Berkshire hogs will average 200 pounds with no other feed than good alfalfa pasture, and will be as fat as the Chinese markets require. From the above it will be seen that for each one year old sow and good alfalfa fields the farmer can make an annual increase of from twelve to twenty fold on original stock. If in connection with alfalfa he raises barley or wheat, he makes the hogs gleaners of the stubble to good advantage, thus turning into pork and money much that would otherwise be wasted. But barley or wheat may very profitably be raised especially for hogs, and the hogs will do their own harvesting. By the use of portable fences, a portion of the field may be fenced and the hogs turned in as soon as the grain is in the dough, and as fast as the grain on this portion is consumed, or nearly so, another portion may be fenced and the fattening hogs turned into this, and so on until they are fat and ready for market. The store hogs may follow the fatting hogs, and in this way the harvest may be completed and turned into meat without the expense of reaping, stacking, or threshing, or freighting to market. What is more, grain thus made into pork finds, as we said before, at all times, a ready home market, and does not have to be sacked or freighted to Liverpool or any other foreign country at great expense. The expense of running a farm stocked with hogs, after the same is well seeded with alfalfa, and fenced into appropriate sized fields, is comparatively light. The same value may be turned off annually from such a farm with one-fourth the labor and expense required to run a grain farm when the grain is harvested and marketed in the usual way. Our river farms are especially adapted to hog raising. The land is good for alfalfa and barley, and these farms generally have tule lands connected with them, on which may, at very little cost, be raised large crops of pumpkins, which also make most excellent feed for hogs, and which to a great extent may also be harvested by the hogs themselves. Good judgment and care are as necessary to this business as in any other, but with these we believe it to be about the most profitable branch of farming in the State.

PRECAUTIONS.

Among the necessary precautions to insure success in the hog raising business may be mentioned, first, the care of the young. Pigs are hardy and easy to raise, but they require a certain kind of care which cannot and must not be neglected. During all the wet season, at least, each sow and pigs should have a separate pen, and a good, warm, dry nest to sleep in. They should also be bed separately until the pigs are, say six weeks old. If any number are allowed to sleep in one common nest in cold, wet weather, losses will most surely occur by smothering by the sows lying on the little ones or by fighting. Small pigs should be kept shut up in a pen until three or four weeks old. Until that age the sow should be turned out daily a part of the day, and after that the pigs may be allowed to accompany her, but should be shut up nights until, say six weeks old. If large numbers of pigs are fed together, or if pigs of different ages are fed in common, the stronger are bound to take advantage of the weaker, and this will create runts or scrubs, which will always be runts or scrubs, and these, if allowed, will materially dimish profits. Some special care must be taken of the pigs when weaning them. The sows will generally wean them at about two months of age of their own accord. If the feed be good, the feed of the sow may be withheld when the pigs are six weeks old. When this is commenced the pigs must have a little extra care and feed. For this purpose a pen may be so arranged that the pigs can get into it, while the sows are excluded. In this pen may be kept a little wheat or rye bran, or other good, nutritious food. The pigs will soon learn where the hole is that leads to this food, and will pass through frequently and help themselves. None but the black breeds of hogs should be raised in this State. All others are liable to the scurvy. The best breeds are the Berkshire and the Essex, or these two breeds mixed. These breeds, if properly cared for, are proof against the scurvy, and are the best grass-eaters, and are plenty large enough for profit. One of the most necessary precautions to insure success in hog raising is cleanliness. The hog is a dirty or clean animal, according as he is treated. Whenever kept in a pen, if given a chance, the pig, big or little, will keep himself clean, and he should be encouraged in this natural instinct. Instead of a mud-hole to drink out of, he should, whether in pen or field, be furnished with clean, cool water to drink. Salt and charcoal should always be kept where hogs can help themselves whenever inclined to do so. Both these articles are a necessity to hogs of all ages and conditions, and their plentiful supply at all times has more to do with the good condition of the hog than most hog raisers of experience imagine. —*Record-Union.*

ABOUT ADVERTISING SWINE.—Under the heading of "Why Is It?" the *Swine and Poultry Journal* has the following suggestive paragraph:

It seems to us that the white breeds of swine must be extinct, or else no one is breeding them for sale. The Berkshire breeders seem to be the only live swine breeders in America. They are the only men who have enterprise enough to advertise to any extent, and in consequence are reaping the reward of their good management in increased sales and prices. We have ten inquiries for the names of Berkshire breeders to one of any other breed; next following in number is the Poland China, with once in a while an inquiry of "Who breeds Suffolk and Chester Whites?"—and as we refer all such inquirers to our advertising columns it is very evident the Berkshire breeders get the best of it. We are surprised at the lack of interest and business tact of interest and business tact of swine breeders, as compared with the breeders of all other kinds of improved stock. By a careful examination of the advertising columns of thirty agricultural and stock papers, we find the proportion of swine breeders who bring their stock before the public by advertising to be about one-tenth that of cattle and one-thirtecuth that of poultry breeders. Surely if it pays poultry breeders so well to advertise (and all admit that it does pay), it would pay swine breeders still better. We find poultry and cattle breeders, also, ever ready to write and tell the public about the useful and economic value of their stock, best manner of breeding and rearing it, and the best breeds for certain localities; but it seems impossible to get a swine breeder to let the public know anything about his stock.

BERKSHIRES.—Says the *Live Stock Journal*, which is one of our best authorities on stock:

The Berkshire is probably the nearest thorough bred among swine, and in that class is like the Arabian among horses. It is undoubtedly the highest type of hog. They have all the good qualities, are good breeders, good mothers, mature early, fatten easily and at a young age, and can live on clover and grass almost as well as sheep.

Some people have a prejudice against the black color in swine, and would on that account object to either the Berkshire or Essex.

Parasites in Bird Cages.

Many a person has watched with anxiety and care a pet canary, goldfinch or other tiny favorite, evidently in a state of perturbation, plucking at himself continually, his feathers standing all wrong, always fidgeting about, and in every way looking very seedy. In vain is his food changed, and in vain is another saucer of clean water always kept in his cage, and all that kindness can suggest for the little prisoner done; but still all is of no use, he is no better—and why? Because the cause of his wretchedness has not been found out, and until it is other attempts are but vain. If the owner of a pet in such difficulties will take down the cage and cast his or her eyes up to the roof thereof, there will most likely be seen a mass of stuff looking as much like red dust as anything; and from thence comes the cause of the poor bird's uneasiness. The red dust is nothing more nor less than myriads of parasites infesting the bird, and for which water is no remedy. There is, however, a remedy, and one easily procured in a moment—fire. By procuring a lighted candle and holding it under every particle at the top of the cage till all chance of anything being left alive is gone, the remedy is complete. The pet will soon brighten up again after his house-warming, and will, in his cheerful and delightful way thank his master or mistress over and over again for this, though slight, to him important assistance.—*Land and Water.*

It is a strange fact that when people indulge in high words they lose low language.

The Dairy.

The Quality of Butter.

Dr. GRISCOM says in regard to butter: I have the highest respect for butter, eaten in its natural state. It is very complicated in chemical compositions; each globule, though on an average only 1-5000 of an inch in diameter, being formed of an onter film or shell of caseine, with a mixture of different kinds of oil, each of which is again composed of an organized substance, known in chemistry as the oxide of glycerine, combined with a separate acid. Each globule in a recent state is distinctly visible in the field of the microscope, and when in unbroken integrity is sweet and digestible; but when old or broken, its chemical character alters, new compounds are formed, and the nutritive property undergoes a change. Time alone will effect this change, but there is another element which will produce it rapidly, viz., heat; and hence the melting process must so alter the relations of its chemical constituents as to impair its assimilative properties.

The substitution of cream for butter in cooking will, of course, obviate all objections to the latter in a melted form, and only this, but you will infuse into the food, with the cream, other nutritious ingredients, such as a portion of the caseine of the milk, which is albumen in a soluble condition—and more or less of the sugar which is also found in milk. A more innocent article than cream, or one more digestible and nutritive in cookery, can hardly be mentioned. There can be but one objection offered to the substitution of cream for butter, and this is its comparative inconvenience. Cream is far less expensive than butter.

Setting Milk.—The discussion on the subject of deep or shallow setting of milk having lately been re-opened, the *Country Gentleman* gives the following report of a committee appointed by a Farmer's Club in Bucks county, Pennsylvania, to make a comparative trial of the two plans. The trial was conducted in the dairy house of Eastburn Reeder:

The pool for deep cans is 36 inches long, 12 inches wide, and 20 inches deep, holding 36 gallons of water. This pool is filled with melted ice water flowing from the ice-box in the top of the refrigerating or cooling cupboard, and when it is filled the surplus water is conducted in pipes to the drain, and passes out of the building. The melted ice water keeps this pool at a temperature of 58°. Four deep cans were expressly made for the purpose, 8¼ inches in diameter and 20 inches deep, capable of holding 5 gallons or 20 quarts of milk, if filled to the brim; but 18 quarts of 4½ gallons fills them 18 inches deep, which is quite as deep as they should be filled for convenience in handling. A "conical-shaped dipper," of the approved pattern, was also made for dipping off the cream from the deep cans, and likewise a large kettle, capable of holding 10 gallons, in which to mix all the milk used in the trial.

The trial commenced on Monday morning, August 19th, 1874. On account of a scarcity of milk in the mornings, but 8 gallons were used at a time during the trial. Four gallons of measured milk were put in one deep can, filling it just 16 inches deep, and weighing 34 pounds. The same quantity of this previously mixed milk, by weight and measure, was put into four ordinary tin milk pans (4 quarts to the pan), and filling them three inches deep. This was repeated for 14 milkings, one week, making a total of 476 pounds, or 224 quarts of milk, 16 inches deep in 14 cans, and the same amount in 56 pans 3 inches deep.

The water in the pool, as before stated, was at a temperature of 58°; when a can of warm milk was immersed in it, it raised the temperature to 60°, but by the expiration of 10 or 12 hours it would be lowered to 58° again by the inflow of fresh ice water. A piece of ice was put in the pool after the first day, so as not to let the temperature be varied any more than could be helped. The pans of milk were set on a stone floor where the temperature was 60°. During the whole trial the temperature ranged as follows: In the pool, from 58° to 60°; in the milk room, from 50° to 68°. Great care was taken to preserve the uniform temperature during the whole trial, admitting cool air at night and excluding the warm air during the day, which necessary feature is under complete control. The milk in both cans and pans stood 48 hours, when it was skimmed. The cream raised one inch in depth in the deep cans. The amount of cream obtained from the deep cans was 46 pounds; from the shallow pans 57 pounds. The last skimming was done on Tuesday evening, August 18th, when the cream was placed in a cooling cupboard and the temperature lowered to 54°. The churning was done Wednesday, August 19th. The 46 pounds of cream obtained from the deep cans was churned first—butter came in 30 minutes, and yielded 15 pounds 10 ounces. The cream from the shallow pans (57 lbs) was churned immediately afterwards—butter came in 50 minutes, and yielded 21 pounds 6 ounces. The result of this experiment, which was conducted as fairly as possible indicates a gain of 5¾ pounds in favor of the shallow pans, or over 25 per cent.

The milk used in this trial was the product of three thorough bred Jersey, two Guernsey, and three grade cows, and averaging over 5 pounds per cow, if all the butter had been obtained from all the milk. The difference in time of churning is attributable to the churn being overloaded with the cream from the shallow pans. The butter from the deep cans was pronounced by some to be a trifle the best, although both would rank as strictly first-class. The dairy-house, in which the experiment was conducted, has been so fully described that nothing more is necessary than that particular. It is especially adapted for convenience and the making of gilt-edge butter, being both cool and dry. The floor had been washed on the morning of the 19th, and was perfectly dry by 11 o'clock. The cooling cupboard under the ice-box is provided with slate shelves, on which the butter is placed to harden before being sent to market. The pool, before mentioned, is a very suitable place to keep the cream before churning, as it should be kept at a lower temperature than the milk. It is not built so much under ground as to make it tiresome in carrying the milk in or out of it; in fact, we, after giving it a critical examination, are unable to tell how it could be improved.

Watering Milk to Get the Cream.—It is well known that milk set in the usual way, although it throws up a good percentage of cream, does not yield up all the fat in the milk, because the skimmed milk, on being subjected to analysis, is found to contain a small percentage of butter, notwithstanding it had on being set thrown up the cream very perfectly. Experiments that have been made in adding water to the milk to facilitate the rising of the cream, have shown that more cream is obtained. Thus a specimen of milk was divided into two portions. One portion was set for cream, and seven hours yielded 7 per cent. of cream. The other portion was mixed with an equal volume of water and the diluted milk set for cream. The diluted milk in seven hours gave 5 per cent. of cream, or 1¾ per cent. more cream than it should have yielded if watering made no difference. It may not be advisable, however, to use the water in this way on all occasions for getting up the cream, since water added to milk hastens the acidity of the liquid, which in warm weather should be guarded against.—*Rural New Yorker.*

Mistaken Policy.—Many farmers entertain the opinion that a cow gives the largest yield of milk when she is poor in flesh, in low condition, and this we suppose explains the reason why we see so many wretched, poor and half starved cows coming out of the barns of this country every spring. But a more careful observation of the points connected with the condition of the cow will invariably show that this cannot possibly be the case; that if the condition is low, the system emaciated, the yield of milk is of necessity comparatively small, that is, small to what any particular cow would be capable of yielding on the same food were she in better condition; and if the yield is large in quality it will be poor in quality, because much of the food which should go to yield milk will necessarily be drawn by the animal to maintain its bodily condition. This point has too often been overlooked in considering the true economy of dairy management.—*Mass. Ploughman.*

The *New England Farmer* says: The milk of some cows, yielding a large quantity of milk and but little cream, will actually prevent the cream from rising on the milk of cows which is rich in cream! This we learned from long, actual experience, and from repeated vexatious losses which occurred before we did learn it.

Anomalies.—Paper can be manufactured from iron. If a tallow candle be placed in a gun and shot through a door, it will go through without sustaining injury; and if a musket ball be fired into water, it will not only rebound, but be flattened; if fired through a pane of glass it will make a hole the size of the ball without cracking the glass; if suspended by a thread it will make no difference, and the thread will not even vibrate. Cork if sunk to the depth of two hundred feet in the ocean will not raise on account of the pressure of the water. In the Arctic regions when the thermometer is below zero, persons can converse more than a mile apart. Dr. Jamison asserts that he heard every word of a sermon at the distance of two miles.

No farmer is excusable who makes his field work a reason for not attending to the vegetable garden. A good supply of vegetables in their season is worth much in money and health.

When love fails, we spy all faults.

The Horse.

More System Wanted in Breeding Horses.

In our last number no less than three correspondents suggest that our breeder are overlooking form and action and running to mere size. By one of these intelligent observers it is insisted that, even in draft horses, it is not profitable to make everything subservient to mere weight.

The English agricultural horse, so called, is usually the large black cart horse, weighing 1,500 to 1,800 pounds, and sometimes even more. The Clydesdale is nearly as heavy, with a little more style and action. These horses, or the heavy Normons, have never been classed as agricultural horses with us. American farmers cannot use horses that are too heavy to make six or eight miles an hour on the road.

Why then, it may be asked, are the heavy-draft horses of the three varieties above mentioned so generally patronized by our farmers?

There are two reasons for it. First, and most important, is the undeniable fact that in many parts of the country the half-bred draft stock sells for more money, and may be brought to market at an earlier age, than any other strain the farmer can breed. They will sell at three to four years old at from $200 to $300, while a good, well-made and well-bred road or saddle horse will hardly make $150, unless he have something to indicate extra speed.

It is probable the draft stock eat more, the amount consumed by all animals being generally in proportion to their size. But they are less liable to accidents than horses of better blood, more easily handled and are fit for market without being broken at all.

We may therefore philosophize as we please —point out the excellence of well-bred stock for the saddle and the road, and even for general purposes—the fact remains that the heavy sort will make the most money for the farmer when he puts them upon the market; and therefore he breeds them.

How long this demand for draft horses will continue to equal of very rapidly-increasing supply, we will not pretend to predict. To avoid loss when the decline does come, we would advise the intelligent farmer to keep up his old stock of well-bred, general-purpose horses. These he can always use, and they will be sure to pay their way, on the road or on the farm; and the produce of well-formed mares of this sort 15 to 16 hands high, not too long in the leg, from stout, thoroughbred, or nearly thoroughbred stallions, will always be in demand at some price.

In reference to the suggestion of one of our correspondents, that we should select draft stallions of more action and less size than has been the prevailing custom of late, we are of the opinion that the time has come, even in this class of horses, that we must look to the form and movement, as well as weight.

If we were going to breed to a draft stallion, we should certainly select one of the smaller size, with bony, clean cut head, well set on a properly-formed neck, flat legs and general conformation indicative of action, in preference to a large, heavy-headed one, with low, thick and upright shoulders, large, round legs, etc.; though it must be confessed that horses of this latter description have been bringing quite as high prices in the market as any others. But we think it will hardly do to depend upon this as a permanent feature in the draft-horse market. Gradually form and action, and even style, will attract attention here, as in other classes.

It will be observed that we have only spoken of what the *farmer* has been doing, and the probability of his future operations in breeding horses.

We have not referred to the professional breeders, who, for the most part are handling only thoroughbreds or trotting stock. As to these, we would respectfully direct their attention to the great need there is, and the great demand we may soon expect, for well-bred stallions for breeding good horses of the general-purpose class. Cannot these gentlemen, who have so much taste for the best type of that wonderful animal known as the thoroughbred horse, work out the great problem of producing from this matchless blood the basis for a great strain of general-purpose horses?—*National Live Stock Journal.*

The Poor Mule.—The amount of fatigue, exposure, and abstinence, which a mule will endure, says a writer, seems almost fabulous. Making long marches across dusty, shadeless plains, going for long intervals without water and with very little food, obliged to pull loads sometimes amounting to five thousand two hundred pounds, up steep hills and through heavy sloughs, subject to cruel treatment and neglect from the teamster, the life of an expedition mule is miserable enough. No wonder when the mule returns he looks woefully angular and thin. The poor animal is frequently driven until he completely gives out, when he is thanklessly turned into the herd of broken down mules.

There is scarcely a more melancholy sight than such a herd. It is a moving bone-yard. Gaunt, lean, with drooping ears, hips that rise like promontories above the general desolation, a disconsolate tail, and a woebegone vssage which would frighten an experienced ghost—the poor worn-out mule is the most wretched parody on Gothic architecture that ever was forced on the public attention. Every vestige of meat has fled from his bones. He is a walking transparency, an animated hat-rack, and I have actually seen his hip bones irreverently used to hang teamsters' hats on.

During our homeward march from the Black Hills, more than one such starved victim laid down his tired frame on the earth that had refused to nourish him, and the benediction of a soldier's bullet called the raven and coyote to a meal which it cost the Government one hundred and forty dollars to procure.

Care of Horses.—The London *Horse Book* says: All horses must not be fed in the same proportion, without regard to their ages, their constitution and their work; because the impropriety of such a practice is self-evident. Yet it is constantly done, and is the basis of diseases of every kind.

Never use bad hay on account of the cheapness, because there is no proper nourisement in it.

Damaged corn is exceedingly injurious because it brings on inflammation of the bowels and skin diseases. Chaff is better for old horses than hay, because they can chew and digest it better.

When a horse is worked hard its food should be chiefly oats; if not worked hard its food should chiefly be hay, because oats supply more nourishment and flesh-making material than any other kind of food, hay not so much.

Rack feeding is wasteful. The better plan is to feed with chopped hay, from a manger, because the food is not then thrown out, and is more easily chewed and digested.

Sprinkle the hay with water that has salt dissolved in it, because it is pleasing to the animal's taste and more easily digested. A teaspoonful of salt in a bucket of water is sufficient.

The following horse talk is, at least, rational and worthy of consideration: Suppose you were in the harness, and I were in the wagon; I had the whip and you the traces, what an ardent advocate you would be for kindness to the irrational creation? Do not let the blacksmith drive the nail into the quick when he shoes me, or burn my fetlocks with a hot file. Do not mistake the "dead-eye" that nature put on my foreleg for a wart to be exterminated. Do not cut off my tail short in fly time. Keep the north wind out of our stables. Care for us at some other time than during the epizootics so that we may see your kindness is not selfish. My dear friends, our interests are mutual. I am a silent partner in your business. Under my sound hoof is the diamond of national prosperity. Beyond my nostrils the world's progress may not go. With thrift and wealth and comfort I daily race neck and neck. Be kind to me, if you want me to be useful to you.

Reminded Her of Her Mother.

The beggar who asked alms of a philosopher on the plea that he was his brother, "counting back to Adam," and received a penny and the kind wish that all the rest of his "brothers" would give him as much, presumed rather too far on his relationship. But natural fellow-feeling is a virtue that ought never to be smothered in the human breast, and often it draws the poor and the suffering very near to us, prompting beautiful benevolence and tender deeds.

A lady was riding in her carriage among the mountains, when they came upon an old woman with a funny little hood on her head and a staff in her hand, walking on all alone. She was neat and clean, and her skin soft and delicate, but her back was bent and she was farefoot. The lady saw she was shoeless and stopped the carriage.

"Here is some money," said the lady, in a tender tone.

"What for?" said the woman, looking up pleasantly.

"To buy shoes for your poor feet. Do you want a pair of shoes?"

The woman laughed a little low laugh, which seemed to come from a heart filled with simple, happy thoughts.

"Don't you want a pair of shoes?" asked the lady, a little hurt.

"I s'pose I do," said the woman; "but I didn't think of anybody's giving 'em to me."

"Take this bill, please, and buy you a pair," said the lady.

"God bless and reward you!" answered the woman, heartily.

The carriage drove on, and the lady sank back on the seat, with tears in her eyes.

"Oh," said she, "I thought I saw my own mother in that dear old lady. She had just such a sweet face and pleasant voice. You don't know how I felt when I thought of my mother, old and feeble, walking with bare feet over the rough, rocky road."

If we all saw fathers and mothers, sisters and brothers, in the poor and the hungry, what a world this would soon be! —*Exchange.*

"I thought you were born on the first of April," said a husband to his lovely wife, who had mentioned the 21st as her birthday. "Most people would think so from the choice I made of a husband," she replied.

Apiary.

The Slaughter of the Bees.

Ah, see where robb'd, and murdered, in that pit
Lies the still heaving hivel at evening snatch'd,
Beneath the cloud of guilt-concealing night,
And fix'd o'er sulphur: while, not dreaming ill,
The happy people to their waxen cells,
Sat tending public cares, and planning schemes
Of temperance, for winter poor; rejoiced
To mark, full flowing round, their copious stores.
Sudden the dark oppressive steam ascends;
And, used to milder scents, the tender race,
By thousands, tumble from their honey'd domes,
Convolv'd, and agonizing in the dust.
Ah! was it then for this you roam'd the spring,
Intent from flower to flower? for this you toil'd
Ceaseless the burning summer-heats away?
For this in autumn search'd the blooming waste,
Nor lost one sunny gleam, for this sad fate?
O man! tyrannic lord! how long, how long,
Shall prostrate Nature groan beneath your rage,
Awaiting renovation? Or their ambrosial food
Can you not borrow; and, in just return,
Afford them shelter from the wintry winds?

Bee Farming in Los Angeles County.

Among the manifold products exported from this county, that of honey promises at no distant day to assume an important position. During late years several parties have entered into the business of bee farming systematically, using the valley lands principally for that purpose. The honey that has been raised in the valleys, has not, however, been altogether free from blemish, and could not compete successfully in the San Francisco and home markets with Eastern-made honey, being of a dark, yellowish color and of a somewhat sickly taste.

During the last year or so bee-keepers have had their attention turned toward the mountain lands, previously considered worthless, and along the foot hills of the San Bernardino range apiaries are now scattered hither and thither. Like the land of Canaan, the foot hills and mountains in this country flow with honey, swarms of wild bees hiving in the crevices of the rocks and in the rotten trunks of trees. There are not a few men actually engaged in noting else than hunting swarms of bees and robbing their hives with considerable profit to themselves.

The sloping lands of the foot hills have as a rule, little vegetation other than greese-wood and wild sage; but these bloom so profusely as to afford the best kind of bee pasturage. A league of such land, with a small stream of water the size of one's finger for the use of the bees to make their wax, is considered ample for a bee farm of at least five hundred swarms. Almost every ravine on the mountain sides contains such a stream of water.

The first consideration with the bee farmer after securing a location is to commence the stocking of his farm. During winter, it is an easy matter to obtain swarms for about $2 each, and with twenty hives to commence, the bee-keeper considers himself fortunate, always providing, of course, that he understands the business. With careful management, these swarms will multiply to three or four times that number during the season, besides yielding some where in the neighborhood of two hundred pounds of honey per hive. It is usual, however, for bee keepers to increase their stock with swarms of wild bees, whenever occasion permits them to hunt.

To the inexperienced, hunting for a wild bee's hive, must appear a hopeless undertaking; but the bee hunter views it as being exceedingly simple. It is done somewhat after the following fashion: proceeding out of the range of the pasturage of his own bees, he places a piece of burning wax on the ground, and adjacent to it he deposits a little honey. If there are any bees in the vicinity the burning wax attracts them to the spot, and they soon alight upon the honey. The hunter watches the bee until it obtains its fill, when it at once takes flight for its hive. Sometimes he waits the return of the bee, which never fails to do so, accompanied by several of its confederates. Some of these the hunter captures and places in a box. He then proceeds in the direction of the first bee. Having gone far enough according to his judgment, he liberates one of the bees held captive, which flies onward in case the hive is not already passed; if otherwise, the bee returns and the hunter has to retrace his steps. Whenever he deems it necessary, the process of wax-burning is repeated. By these means it seldom takes many hours for the hunter to find the cave, rob it of comb, honey and swarm and carry all triumphantly to his own apiary.

The bee hunter has three enemies, with whom he is constantly at war—the moth, the bee-bird and the lizard. The moth works its way into the hive, and if permitted to remain will soon destroy the strongest swarm. The bee-bird bears a striking resemblance to the common camp-jay or butcher-bird, and feeds altogether upon bees, as the craw of every bird killed is found to be filled with their carcasses. Bees are also a dainty titbit for lizards. These reptiles are exceedingly numerous everywhere throughout the dry foot hills, and wherever a bee alights for the purpose of collecting honey, if discovered, she is at once snapped up by one of these voracious little reptiles.

All pieces of comb of any size are taken out and placed in a revolving machine, which, in its revolutions, throws the honey from the cells. When the honey is extracted from the comb, it is placed in a hive and the bees set at work immediately to refill it. The old system is to melt the honey out of the comb by the heat of the sun, the result being the discoloring of the article by the melting of the bee-bread, and the destruction of the comb. It is a saving of two or three weeks' honey-making to a bee-keeper to be able to place the old comb back in the hive, as it would take all of that time for the swarm to make new combs.

Honey from the mountain apiaries is much paler than that collected by bees working in the valleys, and is entirely free from the sickly taste belonging to the latter. Honey thrown from the comb by the machine before referred to is as clear as crystal, and brings the highest prices in the market; which is at present from fifteen to twenty cents per pound.—*Bee-Keepers' Magazine.*

About Bees; for Children.—Have you ever, children, watched the bees in their hive? Their hive is their little city, and each little citizen works hard to build up the wonderful comb in which they store their winter's supply. There are no harder working, busier little creatures in the world than these little insects. They seem also to have a wonderful amount of wisdom and knowledge in their little heads. A lady in Providence relates in the *Little Corporal* a very interesting story about bees, which shows their wonderful power of instinct.

Her father, she tells us, once brought home a molasses hogshead, to be used as a water tank. On washing day, her mother said, "Let us throw the suds into it, to soak the molasses from the bottom." The instant she had done she exclaimed, "O, I have drowned hundreds of our neighbors' bees."

The hogshead was black with bees, that were busily appropriating the sweets from what they must have considered an enormous blossom. The good lady made haste with her skimmer to skim the bees from the top of the water, and spread them on a board in the sunshine; but they seemed drowned and nearly dead, and she was very sorry.

All the bees that were around the hogshead had flown away at the dash of the water, but in a few minutes they returned, accompanied by scores of others. Then began a curious work. They immediately went to work upon the unfortunate bees, turning them over and over and working upon them constantly with their heads, feet and atenuæ. The result of their busy labors was, that one after another gave signs of life, stretched its limbs and wings, crawled about and dried itself in the sun, and flew away. The lady said there were half a pint, at first, and that there remained only about a dozen hopeless cases, beyond the humane efforts of their brothers.

Facts and Fancies.—Never feed bees cane sugar syrup, for as its water dries from it, it crystalizes. The sugar should have added to it three drops of sulphuric acid which, upon being boiled changes the cane sugar into grape sugar (the form in which sugar occurs in honey), which will not crystallize, and which is more natural as food and better for storing than cane sugar. Grape sugar can be purchased at eight cents per pound and comes in solid cakes in boxes containing about one hundred pounds.

The demand for beeswax is always equal to the supply. Circumstances, which to the casual observer would seem upimportant, affect its price; for instance, if gold is high, wax is high, and the low price of gold has a corresponding effect upon wax. In case the Pope dies, the ceremonies in every Catholic church throughout christendom would be of the most elaborate character and long continued. In this ceremony the consumption of wax candles would be so great and immediate that commercial operators estimate the advance would be at least 20 or 25 cents per pound. Last year, our readers will remember, he was not expected to live, and wax advanced to 40 and 41 cents.—*Bee-Keepers' Magazine.*

A Ventilation Joke.—They have a good joke on a "professor of ventilation" down East, who being put into a room at a hotel with another guest, asked the latter to raise a window at night, as the air was so close. "I can't raise it," said the guest, after working at the window a while. "Then knock a pane of glass out," said the professor, which was done. After a while the professor got up and knocked out another pane, then he was able to sleep; but in the morning he discovered that he had only broken into a book-case!

The French have a tool called a thistle-puller, made of wood, and looking very much like a pair of blacksmith's tongs. Five or six old women, armed with this instrument, can clear an acre of ground of its thistles in an incredibly short space of time, and with little more bending of the body than a house maid displays while sweeping a carpet.

Hygienic.

Tired Nature's Sweet Restorer.

SLEEP is a positive necessity. It is a period of recuperation, during which there is a restoration of what has suffered collapse, waste, or disturbance durlng the period of waking activity. The tired brain and aching muscles regain by rest strength and power to obey the mandates of the will. The demands of the material form for rest are so great as to often defy the actlsn of the mind. During the cholera summer of 1849, while practicing in the country, so constant and fatiguing were my professional labors that I have often ridden for miles on horseback sound asleep. Almost every physician in active practice during periods of epidemics, when his strength was taxed to the utmost, has dropped into asleep, as I have done many times while walking the streets. During the battle of the Nile many of the boys engaged in handling ammunition fell asleep, even while the roar of the battle was going on around them. It is said in the retreat to Corunna whole battalions of infantry slept while in rapid march. Even the most acute bodily sufferings are not always sufficient to prevent sleep. The worn-out frame of the victim of the Inquisition has yielded to its influences in the pause of his tortures upon the rack, and for moment he has forgotten his sufferings. The Indian burned at the stake, in the interval between the preliminary torture and the lighting of the fire, has sweetly slumbered, and been only aroused by the flame which was to consume him curling around him.—*Ex.*

Location of Houses.—The *Science of Health* has some sensible suggestions on this topic, which are appropriate here:

Houses should be built on upland ground, with exposure to sunlight on every side. During epidemics, it has been noted by physicians that death occurs more frequently on the shaded side of the street than on the sunny side; and in hospitals physicians have testified to the readiness with which diseases have yielded to treatment in sunny rooms, while in shaded rooms they have proved intractable.

Let there be no bogs, no marshes, no stagnant water in the neighborhood. Then let the cellar be thoroughly drained. Inattention to this subject has caused the death of many a person. No father or mother should rest a moment in peace while their innocent babes are sleeping in rooms over damp and mouldy cellars. Cellars should not only be drained but thoroughly ventilated, otherwise the house must be unwholesome.

Let the drains also be constructed for the conduction of slops and sewage of all kinds to a common reservoir, at a distance from the dwelling, to be used for fertilizing purppses.

Door-yards should be kept clean and dry, composed largely of green swards, on which children may romp and play. This should be their play ground, rather than the carpeted room. They are entitled to it, that the breath of nature and of nature's God, as it flitters through the blue sky, may fan their rosy cheeks, and fill their souls with joy and their bodies with health.

Eating.—As so much of a man's happiness and usefulness in life depends upon eating correctly, and as the housekeeper has so much control over this part of our living, we have thought that a few suggestions on the science and art of eating might be appropriate to this department.

Every emotion of the heart, every operation of the mind, every motion of the body, or of any member or organ thereof, consumes power which must be supplied by the food we eat; and while it is of the utmost importance that our food shall be wholesome, nutritious and digestible, it is of scarcely less importance that it be eaten correctly, at the right time, and with our systems in the right condition.

As first in order we would say, never eat when the body is exhausted. Under judicious management, farmers and their wives need never have dyspepsia, for their plain fresh diet and free exercise should prevent that terrible disease; but statistics we think will prove that they are no more exempt from it than other classes. That they are not, we think, is attributable to the fact that they too often eat when they ought to rest; when their powers are too much exhausted to perform the functions of digestion.

The housewife does her own work, or at least assists about it, works hard to hurry up dinner and have it ready on time, calls the men before dinner is ready, hurrying to the last moment, and then, when she ought to lie down and rest, she sits down to the table and eats. She is so much exhausted that hunger has ceased, her organs of taste are inactive, her salivary glands do not perfectly perform their functions, she does not masticate well, and the food enters a stomach not prepared to perform the work of digestion.

The farmer hurries from the field and his severe labor, and while yet weary and exhausted, sits down and swallows his food, hurrying back to his labor. Is it surprising that, after a few years, the digestive organs become impaired and so many farmers and farmers' wives have wrecked their health before arriving at middle age?—*Rural Home.*

Fresh Air and Pure Water.—Each year typhus and typhoid fevers carry off thousands of victims, whose lives are thus forfeited to their ignorance or neglect of well-ascertained laws. An abundant supply of fresh air and pure water is necessary for the healthful life of both men and animals, and when they are deprived of these requisites, disease and death ensue.

In our last issue an eminent physician presented a statement of the principal causes which produce the typhus class of fevers, and this week he instances cases in which a father and two daughters died from the effects of drinking brook-water which was impregnated with excrementitious matter. It would not be difficult to enumerate a large number of other cases in which death has occurred from similar causes; but enough has been said to answer the purpose of warning our readers against the danger of carelessness with regard to what they breathe and drink. Let us then be advised, and supply our lungs with pure air and our stomachs with wholesome food.—*Hearth and Howe.*

Healthfulness of Lemons.—When the people feel the need of an acid, if they would let vinegar alone and use lemons or sour apples, they would feel just as well satisfied and receive no injury. And a suggestion may not come amiss as a good plan when lemons are cheap in the market. A person should in those times purchase several dozen at once and prepare them for use in the warm, weak days of spring and summer, when acids, especially citric and malic, or the acids of lemons and ripe fruit, are so grateful and useful. Press your hand on the lemon and roll it back and forth briskly on the table to make it squeeze more easily, then press the juice into a bowl or tumbler—never use a tin—strain out all the seeds, as they give a bad taste. Remove all the pulp from the peels and boil in water, a pint for a dozen pulps, to extract the acid. A few minutes' boiling is enough; then strain the water with the juice of the lemons; put a pound of white sugar to a pint of the juice; boil ten minutes; bottle it, and your lemonage is ready. Put in a teaspoonful or two of this lemon syrup into a glass of water, and you have a cooling and healthful drink.

Remedies for Coughs.—The London *Lancet* says: "Anodynes, narcotics, cough mixtures and lozenges are practically of no good, and but too often increase the debility and hasten the fatal end. The best method of easing a cough is to resist it with all the force of will possible until the accumulation of phlegm becomes greater; then there is something to cough against, and it comes up very much easier and with half the coughing. A great deal of hacking and hemming and coughing in invalids is nervous, purely nervous, or from the force of habit, as shown by the frequency when thinkiug about it, and the comparative rarity when the person is so much engaged that there is no time to think about it, and the attention is compelled in another direction."

To these sensible remarks from high authority, every thoughtful observer will be ready to grant a considerable degree of credence. That coughing is in itself injurious, and promotive of inflammation and irritation, is universally admitted. That it is largely under the control of the will no one can doubt who has observed the phenomena of coughing in large audiences. We have heard one cougher start another, until the whole congregation seemed to be in the irresistible grasp of asthma or consumption; and we have known the same congregation, at some particularly interesting moment of a lecture or music or sermon or spectacle, all intent to see and hear, preserve an unbroken stillness. Evidently the way to stop coughing is to stop it!

Editing needs patience, for there are a great many things constantly occurring in the newspaper business which have a direct tendency to make a man fractious and ill at ease unless he has a large stock of patience to fall back upon, whereby he can bear up under his burden. A pious editor out west says: "A man needs grace to edit a paper properly at any time, but especially when he has the rheumatism."

Here is what "Brick" Pomeroy says about the qualifications of an editor:

No man should ever attempt to be an editor and publisher unless he has the pluck of a bull-dog, the tenacity of death, the ugliness of a devil, the mellowness of a child, the independence of most perfect manhood, the fullest faith in his ability to endure and a willingness to wait for years, to the very verge of the grove, and even till the opening of eternity for his reward.

"Brick" is sound on the goose.

Educational.

What is a Good Education?

"TEACH a boy that which he will practice when he becomes a man" is advice which has come down to us form the ancients. Although there is no knowledge which is useless, it is better to be systematic in its attainment; and the kind of knowledge we get should depend largely upon the profession or business we intend to follow. Still a man should not study simply one thing, for this would soon lead to unprofitable narrowness; but should so far as possible, consider all things relating to his pursuit.

Boys should commence to study themselves early; this is especially true of farm boys, for they have thrown around them fewer opportunities to draw out their powers in the direction of the greatest efficiency. Washington has said that "agriculture is the most healthful, the most useful, and the most noble employment of men." Some have the impression that if a man cannot be anything else, he can be a farmer. This is a false notion, for it takes as much ability to become a master farmer as it does to excel in anything else. Agriculture is a science and an art; no one, without special aptitude, need expect either to master or apply its principles as they should be understood and applied.

But what shall be done with those boys who live on farms, but who have a strong inclination for something other than the business of their fathers? Shall they be held to the farm to take a low position among the others of their business, or shall they be permitted to go out into the world in the direction which the promptings of peculiar powers demand, to stand perhaps in the front rank of some other profession?

This is not merely a question of gratification to the individual, but it is one of usefulness to the world at large. Every man is noble when he fills to the best of his ability the post to which nature calls him. Boys who have reached the age of fifteen, generally know something of their tastes and inclination, and their education should have some reference to them. It is for every man to get as good an education as he can; but all have not the same opportunities. All should know how to read and write, and use promptly and accurately the first principles of arithmetic. Good spelling is a useful accomplishment. Honesty is necessary, and should be taught and learned everywhere, whether at home, in the schools, or in the world. Energy and perseverence should be taught while honesty is acquired. Punctuality must be learned in school, as it is one of the chief qualifications of a business man. Then finally a young man should acquire the technicalities and peculiar qualifications needed in his business. Though a man may have received a classical education, a knowledge of business is something which would be quite useful and very often necessary to him if he would be saved from many of the inconveniences brought about by ignorance of the ways of the world. All should know considerable of accounts, for a business habit is a great economizer. Every business man should write a plain, rapid business hand, and have a thorough knowledge of accounts, theoretical and practical. A business college can give the information and practice in these directions, so far as it is possible to give them without actual contact with the business world better than any other school, on account of its greater facilities and the attention given to these particular departments.—*La Crosse Review.*

REASON AND IMPULSE.—All persons having charge of children will be interested in the following observations on this subject by Rev. H. N. Hudson:

Principle and impulse are often spoken of as opposed to each other. And, as men are, such is indeed too often the case; but in ingennous natures, and in well ordered societies the two grow forth together, each serving to unfold and deepen the other; so that we have principle warmed into impulse, and impulse fixed into principle. This gives us what may be described as a character informed with noble passions. And say what we will, bad passions will have the mastery of a man unless there be good ones to countervail them. For Reason, do the best she can, is not enough; men must love; and their proper safeguard is in having their love married to truth and virtue. When such is the case the state of a man is at peace and unity; otherwise, he is a house divided against itself, where principle and impulse strive each for the supremacy, and rule by turns; headlong and sensual in his passions, cunning and selfish in his reasons.

BE FAITHFUL.—A man cannot afford to be faithful under any circumstances; a man cannot afford to be mean at any time; a man cannot afford to do less than his best at all times and under all circumstances. No matter how wrongfully you are placed, and no matter how unjustly you are treated, you cannot for your own sake, afford to use anything but your better self, nor to render anything but your better services; you cannot afford to cheat a cheater; you cannot lie to a liar; you cannot afford to be mean to a mean man; you cannot afford to do other than deal uprightly with any man, no matter what exigencies may exist between him and you. No man can afford to be anything but a true man, living in his higher nature and acting from the highest considerations.

THE sure foundations of the State are laid in knowledge, not in ignorance; and every sneer at education, at culture, at book learning, which is the recorded wisdom of the experience of mankind, is the demagogue's sneer at intelligent liberty, inviting national degeneracy and ruin.—*G. W. Curtis.*

WE cannot be too much impressed with the importance of literary culture. We should not despise nor think lightly of the moral, imaginative or poetical elements of our being. The poetical element has more to do with our happiness than any of the coarser kinds of knowledge called facts.

Learn thoroughly what you learn, be it ever so little, and you may speak of it with confidence. A few clearly defined facts and ideas are worth a whole library of uncertain knowledge.

"Time softens all things," except the young man who parts his hair in the middle and whistles in the street cars. Nothing can make him softer than he is.

Correspondence.

Soliloquy of a School Teacher.

BY ELISA E. ANTHONY.

TALK about peace in a school room! I've been endeavoring to find it for the past month, and I have not even found an infinitessimal atom of it—suppose it was lost before I arrived.

I only wish that those people who call children "sweet cherubs" and "little angels" could experience what I have. They would change their opinion after seeing the "sweet cherub" throw himself on the floor and roll, shrieking with passion, because he could not have "his own sweet will."

My patience is almost exhausted. If a scholar transgresses the rules, and I punish him for so doing, the following day an irate parent will visit me, and say that her precious boy is very delicate and must not be thwarted; and if I venture to explain, she will raise her vinaigrette to her aristocratic nose and sweep proudly away, while her "precious boy" behaves, if possible, worse than ever.

Sometimes I fall into a day dream, when the pupils are quiet, and I am roused by "Pierse, ma'am, Bill Brown is pinching me black and blue,"—"I aint, either,"—"You are,"—"Please'm Molly Hicks threw an apple at me,"—"Can I go out?"—"Say, teacher, isn't six times six forty-two?"—"Oh! teacher, Sally Marsh is throwing notes to the boys,"—"You're a little tell-tale; I ain't doing no such thing,"—and so on, until I am almost crazed with the noise.

I recover my dignity, which I had almost lost, and restore order for about five minutes.

In a short time I hear a loud whisper, "S-a-y, Clementiny Snipkin, I heard my ma say that Mrs. Firy told her that she heard from her brother-in-law that he saw teacher walking with a man; just think of it—a *man!*" and there is a titter, which I quickly suppress, and am—oh, so glad when school is out and I am free. To think that I cannot walk with my cousin without people making remarks. My every action is criticised. If I speak, every word I utter is watched, to see if I speak contrary to the rules of grammar.

If I read a novel, their hands are uplifted in holy horror at such waste of time; and the first opportunity they have they borrow that condemned novel.

If I speak to a man under sixty years of age they say I am a flirt; if I remain quiet I am called haughty.

If I dance they are shocked and say I am frivolous; and if I decline to dance they kindly say that I am above my place.

If I dress plainly I am styled a miser, and my friends (?) wonder what I do with all my money; and if I dress a trifle better I am wasteful and extravagant.

It is very difficult to please everyone, and the best thing I can do is to get married and please one person, so remember me when you see an eligible young man.

FLUME MILL, August, 1875.

GRATITUDE.—A bachelor made a will, leaving his property to the girls who had refused him, saying, "to them I owe all my earthly happiness."

Women.

Something About Woman's Sphere and Work.

BY NELL VAN.

SAYS T. W. Higginson, in the *Woman's Journal:* "If woman is merely a duplicate man, she is a very inferior man. If he is the standard of human perfection, she is so far beneath that standard as to be hardly worth considering. But, on the other hand, if he be tried by her standard he is equally far removed. Thus we discover that each is one-half of the whole; we must set his greater physical strength against her greater pliability and endurance—his slow logic against her swift intuitions, before we can do justice to either. And when we once do this, the inevitable outcome is—woman suffrage.

"The same principle applies to co-education. If by adding twenty-five girls to a school of twenty-five boys, or the converse, you merely filled an additional number of seats, it would be a matter of little importance. But the teacher finds, when the change is made, that his school is not merely enlarged in size, as if an added number of the same sex had been enrolled. With the other sex a new element has come in, which gives new life and interest to the school; an element of mutual excitement, pleasure, courtesy, pride. 'I never yet saw a school,' said to me a teacher of great experience, 'that I could not rule by the waving of my finger, if I could only have boys and girls together.'

"The same rule applies to occupations. In the introduction of women into a variety of employments the assumption is often made that you are, after all, only increasing an inferior class of men. But the *Woman's Journal* has again and again pointed out that the general introduction of machinery is the introduction of woman into all industry. Every step in machinery exchanges brute strength for delicate manipulation. Woman finds daily more and more work, of a kind which she can not only do as well as man but better than man, by reason of quicker wits and nimbler fingers. This process bids fair to go on, we hold, till the sexes compete fairly in the business market."

When such good words come to us from one who has long been a keen observer of the capabilities of our sex, should we not, as a body, strive to deserve the exalted opinion so publicly expressed, and each do what we can to elevate the down-trodden and encourage them in becoming the thoroughly practical beings it has been proved we are capacitated for? Encouragement is what we need. Give us the right hand of fellowship, good men, help us to obtain honorable employment, and let us enter the ranks of the world's workers if our tastes so incline, without calling us disagreeable names to remind us of the accident of sex, which we have been told by wise physicians must debar us from attempting any but the prescribed employments belonging to *woman's sphere.* Many capable women hide their talents, or prevent their full development, from fear of the censure of an unsympathizing world. Sometimes the possession of wealth and position interfere with their growth; but the hand of adversity comes only too soon. Sadly the poor victim finds herself wanting in time, opportunity, strength and money, which prevents her from pursuing the most congenial pursuit of her life, and the consequence is, the world is robbed of an efficient artisan, and the ranks of the sewing woman are swelled with perhaps but another indifferent worker. Come to the rescue of all womankind; teach young persons that they are never fulfilling their destiny till fairly launched into some industrial pursuit, congenial if possible, then this world will possess ten-fold more attractions above those ordinarily enjoyed, and the cause of humanity will be advanced by living specimens of practical industry. A foretaste of usefulness will be obtained which cannot be taken away, and life will be so much the richer to those fortunate ones. The world moves on. Never despair while so many good persons have the welfare of humanity at heart.

A Lady's Opinion Upon Political Questions.

POLITICS AND TEMPERANCE.

How strange it is that some dislike some mixtures and like others. If there is alcohol in the mixture, all's well, but not otherwise. This is the reason why many are content that

INTEMPERANCE AND POLITICS

should be mixed together, as they always have been. The stomach is the great ballot-box of the nation. A mixture containing alcohol is the most powerful argument which politicians can wield to gain the favor of the "dear people." Rum formerly controlled our elections, and it still influences them more than most people imagine. A few years ago it came out openly, and a sharp eye might have seen at every election ground the beautiful Goddess of Liberty sitting astride a whisky cask, with a jug on the end of her poll. Intemperance and politics were inseparable.

DISSOLUTION OF THE UNION.

"Union is strength," they say, but it depends on the kind of union. The union of rum and State is the destruction of strength. It is the people's interest to get rid of this union as soon as possible. Now, we must either carry temperance to the polls, or carry rum there. Which do you prefer? If a man comes to you to work in your orange grove, or to plow or dig, or to take care of your horses, you want to know if he is a sober man before you employ him. But is his employment isto make laws, or to administer them, or to guard your property, a drunken man will do just as well, provided he belongs to the right political party and has a good chance of being elected. If a temperance man refuses to vote for the drunken candidate, the air rings with the cry of "proscription," and "mingling temperance with politics." There is more need of temperance at the polls now than almost anywhere else. It would be a curious sight to have a legislature of sober men, and we want to see it as soon as possible.

REPUDIATION.

Let us repudiate all office-holders that are adicted to strong drink, and all drunkard-makers also.

VETO.

Let us veto dram drinking in every form, and we shall have a free and happy people. In exercising the veto power, we are treading on no doubtful ground; we exercise no doubtful privilege. We have a constitutional right to do so, and no one will dispute it.

I am also in favor of a

NATIONAL BANK,

and I will give my plan of it. Several hundmillions of dollars are wasted every year in these United States to purchase alcohol and to remedy its consequences. Let it be laid aside as a capital for a national bank.

INTERNAL IMPROVEMENTS

I go in for to their full extent. A number who were old topers a few years ago, and who have signed the Declaration of Independence know by experience what "internal improvement" means.

PRESERVE THE CONSTITUTION

by repudiating alcohol, the greatest enemy of the human constitution. It is impossible for a free government to exist where it is used. No man who drinks is free. He may talk of liberty, but he does not know what it is. Throw off the shackles of appetite and enjoy liberty.

I want you all to mingle temperance with politics, so far as to produce an effectual dissolution of the union between intemperance and politics. Carry temperance to the polls, so as to apply the doctrine of repudiation to rum-drinking public agents. Save your money, and in this way get rid of National and State debts. I want every man, woman and child to practice internal improvements and preserve the constitution inviolate from the influence of rum.

A New College for Women.

Our correspondent, "Nell Van," who was acquainted with the family, and who has taken so much interest in educational movements, would call attention to the establishment of the new college for women, which promises to become a grand institution for the advancement of the sex in many of the qualifications for a useful life.

The Northampton, Mass., *Journal and Free Press* of July 17th gives an interesting account of the inauguration of Smith's College, of Northampton, an institution founded expressly for giving women a complete college education. We briefly extract from its columns:

Wednesday last was a bright day for the cause of higher education in Massachusetts, and, indeed, in the world. It was the occasion of the dedication of Smith College, at Northampton. The fact is an index to the progress of the movement which brings

WOMAN TO THE FRONT,

in the equality of privileges, and gives education its place as the foundation for the security of rights. These features form the basis of the institution. Says the instrument which is the constitution of the college: "By the higher and more Christian education of women, what are called their "wrongs" will be redressed, their wages adjusted, their weight of influence in reforming the evils of society will be greatly increased; as teachers, as writers, as mothers, as members of society their power for good will be incalculably enlarged." And again, the object is stated to be "The establishment and maintenance of an institution for the higher education of young women, with the design to furnish them means and facilities for education equal to those which are afforded now in our colleges to young men."

THE FOUNDER OF THE INSTITUTION

was a woman of the true New England type, Miss Sophia Smith, of Hatfield, Mass. The family was among the earliest of the settlers of that beautiful Connecticut Valley town, and though it has now become extinct, it has left a vitalizing force in the community that will

perpetuate its name and honor. It was a wonderfully marked family in this respect. The uncle of Sophia Smith was the founder of the Smith's Charities, which, with a large fund, extends a helping hand to the indigent and worthy boys and girls, young women and widows of the vicinity. From him also is a fund, at present accumulating, for the establishment and working of an agricultural college at Northampton.

The Smiths were industrious and frugal farmers, with strong, upright characters, who by small gains and prudent investments, accumulated the fortune which was the nucleus of their charities. Oliver Smith, who established the Smith's Charities, started when twenty-one years old with a patrimony of $500. At his death his estate inventoried $370,000. Sophia Smith acquired the bulk of her estate from her brother, Austin Smith. At his death in 1861, she had in her own right about $30,000, and received from him the sum of $200,000. This property she immediately placed in the hands of the late Hon. Osmyn Baker, who was the active manager of the Smith's Charity fund, and at her death in 1871 it had accumulated to the sum of $468,843, while in the meantime she had given to Andover Seminary $30,000, and made other charitable gifts.

THE BEQUEST.

The larger part of this sum was left by the will of Miss Smith for the establishment of this college. $75,000 was given for the building of Hatfield Academy in her native town. Some $91,000 were given away in various ways, in her will, including the Hatfield Academy fund, and adding to this expense of probate, it left for the chief bequest, in round numbers, the sum of $350,000. And to this was added $25,000, which the will required should be given by the town of Northampton. This fund has been invested and accumulating since her death, so that at the present time it inventories at par value a little more than that amount, beside what has already been expended for building. By the will no more than one-half of the bequest can be appropriated to buildings and grounds, the other half or more to be invested as a permanent fund, the interest of which, alone, shall be used forever for furnishing teachers, library and apparatus, and for general purposes of the institution.

THE BUILDINGS

of the college are pleasantly located on an eminence near the center of Northampton, commanding a view of the town, and the valley and mountains beyond. They seem naturally at home in a town around which are grouped so many important educational institutions, and which has itself long been a center of educational, social and intellectual advantages.

The College is now fairly started on its career. There are none but wish it the success which it is the high aim of its officers to achieve. "I would have it," said the founder, "a perennial blessing to the country and the world." That it will be such we feel certain.

A Response from "Jewell."

Eds. Agriculturist: I was very much amused at your correspondence signed "Sara Toga," in which "Jewell" was handled without gloves because she was honest enough to admit that she did not know *everything* and her husband *did* (to her). Before coming to the first period I had discovered "Sara Toga's" sex. No woman ever flaunts her social and moral superiority in the face and eyes of husbands and brothers so recklessly. Nor is a woman to be disenfranchised in her own eyes because she does not know how to make good bread—a man would perhaps believe her incapable of voting for such a reason—while it would be in order to marry one who did not have that knowledge. "Sara" could perhaps be able to prove to your readers that he knew everything, and therefore was qualified to vote. How I wish the same test were applied to the men! Thanks to "Sara" for the receipt for making yeast and bread, but if he will drop into our little "shady shanty" some day this embryo farmer's "Jewell" will give him a taste of her bread, and see is his wife can beat it—for I'll be bound he don't always make his own bread.

PROPER WHEAT.

The History and Valuable Qualities of this Cereal.

Last month we made mention of this wheat as having yielded one-third more to the acre on Mr. A. Woodham's farm than the beardless wheat. The following letter, written by A. D. Starr, of the Starr Mills of South Vallejo, gives a correct history of the Proper wheat, and sets forth its valuable qualities as a variety for cultivation in this State. It also gives its relative value for flour making:

Editors Sonoma Democrat—Sirs: Your letter of inquiry relative to Proper wheat is at hand. I now give you in brief such information as I possess. This wheat was first grown in this State on the farm of Mr. Proper, in Sutter county, which accounts for the name "Proper," no other being positively known for it. It was found growing in one bunch, or stool, from one kernel, if I am correctly informed, in a field sown with imported Chili seed barley which I furnished. This first handful of heads of wheat was shown to me. I liked its appearance and advised its being propagated with care, with the request that as soon as enough could be spared in the future I wanted it to make a test of its good qualities for flour by grinding. In due time I got the wheat, made the test, and found it superior to any wheat I had ever ground. The wheat is particularly well adapted to short seasons, in dry, hot climates; it being a bearded wheat the hot, dry winds and sun do not blight or burn the upper end of the head, as often happens with bald wheat; the beards protect it. For early sowing on rich loam or summer fallow land I do not so particularly advise it, being informed that it does not give so large a yield as some other varieties. It seems to be particularly adapted to late sowing, giving a large yield of very superior grain, which makes also a large yield of superior flour, giving but a small quantity of offal. We have been able to purchase enough of it so as to keep it constantly on hand for daily mixing in wheat we grind, more or less, for the past two years. Sutter, Yuba, Colusa, Butte and Solano counties must have raised some 20,000 tons the past season. It value is certainly worth fifty cents per ton more than any other wheat for milling, of the same cleanliness, etc.—yes, or shipping either. I have seen a good crop raised of Proper wheat, sown late in March, upon which no rain fell after sowing, yet it matured some ten to fifteen days sooner (and was ready for harvesting) than other earlier sown wheat.

Yours, truly, A. D. Starr.

Little strokes fell great oaks.

Stick to the Farm.

Within the last year or two, we can number a half dozen of our farmer acquaintance who have been lured to financial destruction by the glamour of speculation. And going back ten years, and carefully looking up the history of the men we know, who have left the farm to engage in trade, we find that not one in ten has succeeded. A recent case has come to our knowledge that is full of instruction to those who are tempted to leave the farm. By his own exertions alone this farmer had accumulated a handsome competence, and at the age of fifty could look with pride over his broad acres of rich land, his fine herds and flocks, and comfortable buildings. He was out of debt, and had a handsome surplus in the bank. Two years ago, in evil hour, he was induced to invest in a dry goods store. Last fall his farm and stock were sold for debt, and he is reduced to the necessity of day labor to support his large and yet dependent family. All the accumulations of over thirty years of hard toil—many of them years of privation, hardships and the closest economy—were swept away in a few months by this demon, speculation. And this is not a solitary case. Every reader can count similar ones in his own list of acquaintances. They all teach one great lesson—stick to your legitimate business, the business in which you have succeeded. "Let well enough alone." A man who has lived all his life on a farm stands but little chance to compete successfully with the men who have been educated and trained for speculative pursuits. The two occupations are extremes—honest toil at one end, and the tricks of trade at the other. If you have a good farm, keep it, improve it, adorn it, be proud of it, and when you are done with it, hand it down to your children; the best inheritance, with a good name and education, that you could leave them.—*Ohio Farmer.*

The Kind She Did Not Want.

As one of our census takers was gathering the census particulars at a house in this town a girl who had listened with much attention and apparent curiosity to the questions, finally asked:

"Why do you wish to know the age of every one, and whether they are married or not?"

The head of the family replied: "This man provides all unmarried persons with husbands and wives."

This answer was apparently received with credulity by the girl; but she asked: "How does he make out to suit each person?"

"Oh, I can tell pretty well," replied the enumerator. "You, a country girl on a farm, will not want a dandy from the village, nor a village flirt a country boy."

At this the girl dropped the subject until the enumerator left the room, when she followed him out doors and addressed him thus:

"I hardly believe what you say, but I wish to tell you one thing, if you send me a man, I don't want one that uses whisky or tobacco. I will die an old maid before I will have such a man."

She was assured that such a candidate would not be presented.—*Ellenville Press.*

It's strange but true, that the larger the income, the harder it is to live within it.

Jokes are like nuts—the drier they are the better they crack.

Grasshoppers Will Eat Peas.

Greeley, Colorado, August 18th, 1875.

Eds. California Agriculturist and Live Stock Journal: I notice a paragraph in your Journal for August that grasshoppers will not eat peas, and suggesting to your readers "that the fact that peas can be raised in a grasshopper region, is an important one." My experience is different from that of the Minnesota farmer refered to in your paper. Early this spring I had forty-five acres of wheat and fifteen acres of other crops eaten and entirely destroyed by the young hoppers, among which were an acre and a half of peas. To be sure the peas were left for the last. Finely a friend informed me, that while he was travelling in Utah several years ago, during one of those grasshopper plagues, that he saw nothing left but that was eaten, save broom corn. Encouraged by this information, I at once sent to St. Louis and procured broom corn seed for twelve acres of ground which I planted; but last week the grasshoppers came and lit and showed a particular fondness for my broom corn, in fact they eat it in preference to my white mexican field corn which was along side and appeared to like it as well as my buckwheat; they also lit and eat liberally of my remaining field peas which were not yet ripe. We have also seen them strip the cotton wood and other trees of their foliage, I am therefore of the opinion that there is nothing in the line of vegetation but what the locust will eat. Respectfully Yours,

M. J. Hogarty.

UNIVERSITY NOTES.

The New Course of Instruction in the College of Agriculture.

From the bulletin of the University of California we give publicity to the following:

The Junior Year, First Term—Descriptive Botany, with exercises in the analysis and determination of plants. Excursions will be made occasionally during the session, as the seasons may render them profitable. Economic Botany—Description of plants useful and injurious to agriculture, and their varieties.

Second Term—Agricultural operations and implements, and their application in the cultivation of the several crops. Illustrative exercises in the agricultural grounds whenever opportunity is afforded.

Senior Year, First Term—Agricultural chemistry. Nutrition of plants from atmospheric sources. Inorganic ingredients of plants, their importance and derivation. Ash analysis, Physics of plants, Mechanism of nutrition and movement of juices. Germination and development of plants and accompanying chemical changes. Second term—Chemistry and physics of soil; their origin, formation, classification. Physical properties; their determination and influence. Mechanical analysis. Chemical composition; relation to vegetable nutrition. Chemical analysis; its methods, utility and interpretation. Exhaustion of soils by irrational culture. Rotation of crops, green-manuring, fallowing, sub-soiling, through drainage, irrigation. Manures, their kinds, preparation, use and value. The rational system of culture.

Other subjects, and matters of detail, properly belonging to a course of agriculture, and special cultures, such as stock-raising, apiculture, floriculture, arboriculture, fruit-raising, etc., will, as far as practicable, be taught by special lecturers invited for the purpose. Occasional lectures on chemistry and physics of housekeeping will be delivered by Professor Hilgard.

In addition to the main library of the University, which contains some 12,000 volumes, and which is open during fixed hours to the students of all the colleges, the Agricultural College has a special and select library of several hundred volumes, which relate directly to farm life and labor. In the Museum, specimens of the botany of the State and many indigenious woods can be examined by the students, and the cases in the lecture room of the Professor of Agriculture also contain material of interest and value. The private collection of Professor Hilgard, containing some 12,000 specimens of American and foreign plants; which are arranged and classified expressly for the purposes of instruction and investigation, is deposited in the lecture room of this College for the use of the students. The University also possesses the large collection of plants, rocks, etc., of the State Geological Survey, making with the foregoing an unusually extensive series of specimens for study.

Curing Alfalfa and Corn-Fodder.

We have freqnently advised mixing dry straw with alfalfa when it is stowed away in the mow. The straw becomes softened, and the alfalfa cures without heating. The *Ohio Farmer* tells how corn-fodder is best cured in the same manner:

A farmer in Ontario county, New York, sowed oats broadcast, in the usual amount, and then drilled in corn, using three bushels of corn to one of oats. When the oats were ripe the whole crop was cut like grass, and the dry oat straw, absorbing the moisture of the stalks, rendered the whole easily cured. One of our correspondents last year, stated that he cured his fodder by placing it in the mow between alternate layers of dry straw, and that his cattle and horses devoured the straw with as much relish as the fodder. As corn-fodder is a difficult thing to cure when cut green, these suggestions should be acted upon when fodder is put in the barn.

A Fourth of July Mule.

A bad little boy in Portland lit a pack of shooting crackers and threw them into the street to see them "go off." One of Ike Bateman's mules came along and swallowed them before they "went off." The mule walked about fifteen feet and stopped. He laid his left ear around against his ribs and heard something. It was them crackers having fun. The mule picked out about three and a half miles of road and started. A negro met him about a mile the other side of the almshouse, going south, white with perspiration, with streams of smoke shooting out of his nostrils, mouth and ears, while his tail stuck straight up, and a stream of blue and green smoke about ten feet long followed in the rear. Ike found his mule yesterday morning sticking half-way through a farmhouse near Paddy's Run, still smoking. The man had got his family out and put 'em up into a lot of trees. Ike hauled his mule home, when he got cool enough, on a dray.—*Louisville Courier-Journal.*

We are Under Obligations to Robert Beck, Secretary of the State Agricultural Society, for office use, a set of bound volumes of the "Transactions California State Agricultural Society" since 1864, and our return of thanks in due form is but a slight expression of what we feel. Also, by the same, a dozen unbound volumes transactions 1874 for distribution. These books contain a deal of interesting matter and are as reliable statistically and otherwise as any such work can well be.

A Montana justice of the peace, when he marries a couple, says: "Arise, grab hands—hitched—six dollars!"

In Press.

We are in receipt of a few proof sheets of a work now in press with Bankcroft & Co., San Francisco, entitled "The Patrons of Husbandry on the Pacific Coast, by Ezra S. Carr, M. D., L. L. S."

From the sample leaves sent us, we observe that the book will contain several hundred pages of matter, also that the title is but a text to the comprehension of such subjects as Social and Political Economy, Agricultural Development in the ancient world in Europe and America. Capital and Labor, The Farmers Awaking, Industrial Education, Monopoly and Railroads, Paper Money and Protective Tariffs, etc., etc., as well as to an account of Grange Organization, all progress on this coast up to the present time. We think it will be such a work as will be in demand, and will call out much adverse criticism, as well as do much toward educating the people.

The Santa Clara Valley Agricultural Society's Annual Fair will be held during the first week in October, commencing the fourth.

California Borax.

About two years ago some outcry was made in America about the discovery of vast deposits of borax said to have been discovered in California. The glowing accounts which appeared in some of the American papers were read on this side with a certain amount of incredulity, not altogether perhaps unpardonable. However, subsequent results have proved that unlike those other "discoveries" in that locality which will be fresh in our readers' minds, the borax deposits exist otherwise than on paper, and are, in fact, remarkable in extent. Towards the latter end of 1873 some borax from the new source of supply came into the London market, and was regarded curiously, if not dubiously. The importation had little effect on the course of prices, and it is probable that the chemical trade entertained a lurking suspicion that the thing would turn out a hoax. All through last year, however, supplies came forward from the same source, and for some months past they have been on a large scale. The *bona fide* character of the discovery is thus set at rest, and the only question is as to its extent. The *Alta* says: "The great borax lake will afford a very large business. Very extensive works are now nearly completed for the refining and purifying of this borax for shipment. Millions of tons of crude borax are in sight in this immense deposit. Stimulated by the action of the railroad company the Borax Company have put up large works, and will soon be prepared to turn out from twenty to fifty tons of pure borax per day. This will add largely to the freights of the railroad. The deposit of borax is simply unlimited. It covers an area of eighteen miles in length by six to eight miles in width, covered with crude borax from 2 to 5 feet thick. The crude material will average from 20 to 40 per cent. Ten thousand men would not take out the deposit in fifty years, and it is constantly increasing." In accepting the above account it is necessary to make due allowance for national enthusiasm, but it is beyond question that California is able to boast a new and important addition to the products of her soil. The California borax has come into active com

petition with that from other sources, and while, at the beginning of 1874 the price of refined borax in the English market was £100 per ton, it can at the present time be bought for £56. The pottery districts, where large quantities of borax are consumed, are perhaps the chief gainers on this side the Atlantic by the discovery adverted to.—*Br. Journal.*

FINE FRUIT.—We were shown this week some of the finest specimens of lemons and oranges that we have ever seen in the State. They were raised by H. M. White, on Upper Tule river, in this county. The lemon measured twelve inches around one way and nine the other, and the oranges ten inches in circumference, and were fine, rich-looking. The trees are twelve years old, and yielded over 500 to the tree this year. No doubt Tulare county will become famous for its fine productions of fruit. All that is required is an effort.—*Tulare Times.*

THE FOOT AND MOUTH DISEASE AMONG ANIMALS IN DORSETSHIRE, ENGLAND.—A telegram of date London, August 24 says: The foot and mouth disease has broken out with great violence in Dorsetshire, where twelve thousand animals are down with it. The distemper is spreading rapidly.

Young wife (to George, who arrived home in the small hours of the morning)—"We are one, dear, now that we're married, are we not?" George—"certainly, my darling, why?" Young wife—"Oh, I only wanted to know; because, if we are, I must have been dreadfully inebriated last night."

HARRY, after looking on while his new little sister cried at being washed and dressed the other day, turned away, saying, "If she screamed like that in heaven, I don't wonder they sent her off."

SAID a colored Georgia preacher: "Dar's robbin' and stealin' everywhere. Dar's de Beecher business, de Woodhull business, Sumner is dead, tornadoes come whoopin' around, de Freedman's band has busted, and it 'pears as if de end was nigh, mighty clus at hand!"

ONE of the cardinal principles of the Grange is to buy nothing you don't want, and nothing you can't pay for. No man always living up to this principle ever died in the poorhouse.

THARE is advice enuff now layin' around loose to ruin just three such worlds az this. What we are suffering most for iz sum good examples.—*Josh Billings.*

"MY lecture," said a California orator, "will be brief." A turnip hit him at that instant, and he announced: "The meeting stands adjourned."

IT is said Egypt is the home of the fragrant onion. There is this about the onion—you can always tell where it is.

A LAZY school-boy, who spelled Andrew Jackson "Aru Jaxon," has been equalled by a student who marked the first of a half-dozen shirts John Johnson, and the rest "do."

☞ The California Glove Manufactory is now located opposite the Auzerais House, Santa Clara Street, San Jose. The proprietor does good honest work, on good material, and sells at prices to suit. Do not confound this with Lions establishment, but examine the work and prices and you will find everything to be as represented.

SAN JOSE INSTITUTE AND BUSINESS COLLEGE.

A Day and Boarding School for Both Sexes.

I desire to call special attention to this School. Education is none the less thorough because practical. Knowledge is not superficial because its theories find illustration in the work of every day life. The mineralogy of mining, the chemistry of agriculture, and the finance of business are as likely to go to the depths of their respective subjects as when taught merely as theories with no respect to their practical application.

Gradually the Institute is raising its educational standard and improving its facilities to teach, confidently expecting that, with the increased capacity for usefulness, will come a corresponding increase of patronage.

Students desiring board will find comfortable rooms and, as we shall endeavor to make it, a pleasant home, in the Institute buildings.

ISAAC KINLEY,
Sup't. San Jose Institute.

☞ Any family within reach of San Jose should bring their pictures to be framed to Geo. S. Holmes, 438 First Street. Low rents, large purchases for cash, and the best facilities for mounting and framing, together with a disposition to suit everybody, gives him such a rush of custom that his prices are astonishingly low. Don't fail to call at his store and see for yourself.

☞ We have just received from Sherman & Hyde, music publishers of San Francisco, two beautiful songs, entitled "Is my Darling true to me?" and "Would you answer yes or no?" both composed by Chas. E. Pratt, Conductor of the De Murska Concert troupe, and dedicated to Alice Dunning Lingard and Dickie Lingard, respectively. These songs bid fair to become immensely popular, as their sale has already reached several thousand. So say the publishers, who are receiving large orders from the East. Copies will be sent by mail, post-paid, to any address by the above firm, upon receipt of the marked price (35 cents each) in currency or postage stamps.

IT is not until we have passed through the furnace that we are made to know how much dross was in our composition.

The two large tin and stove stores in San Jose, carried on by C. E. Campbell and Milton Campbell, have been combined under the proprietorship of C. E. Campbell. The fine large store under the Odd Fellows Hall now occupied by him, is probably the most complete store of the kind on this Coast. Give them a call.

The Alden Fruit Drying Factory will make a run on grapes this season. Mr. C. T. Settle, the Superintendent, says he knows that he can make superior raisins. We shall take pains to investigate the matter and report what we think about it, whether favorable or otherwise.

I. O. G. T.—GRANGER LODGE, No. 295, meets every MONDAY evening, at 8 o'clock, in their Hall, No 284 Santa Clara street, over the S. J. Savings Bank. Members of sister Lodges and sojourning members in good standing are invited to attend.

JOHN B. STEVENS, W. Sec'y.

Every Intelligent Farmer knows that neither boys nor hired men are always to be relied upon, in his absence from home, for watering stock.

Every Stock Raiser will admit that a constant supply of water keeps his stock in an easy and contented condition, and they will consequently fatten faster. By the use of the ECLIPSE SELF-GOVERNING WIND-MILLS water can be abundantly furnished at any desired place.

By making a tank 16 ft. long, 8 ft. wide and 2 ft. deep, you have a reservoir of nearly 60 barrels of water, which the ECLIPSE MILL will keep filled, for occasional calms.

We do not build the ECLIPSE for a cheap mill. We make it for *service*, and our castings alone weigh 107 lbs. more than those of other mills. Our woodwork is too well known for comment. as all acknowledge our wide, heavy fans superior to the thin, narrow slats.

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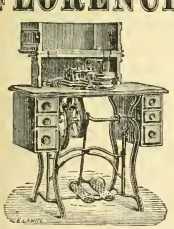

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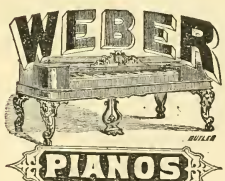
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Volume 6. CALIFORNIA Number 10.

OCTOBER.

AGRICULTURIST AND LIVE STOCK JOURNAL

Subscription Price, $1.50 a year. | SAN JOSE, CAL., OCTOBER, 1875. | Single Copies, 15 cents.

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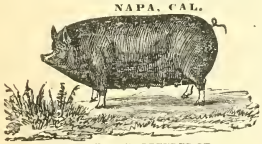

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., October, 1875. No. 10.

LETTER FROM WOODLAND.

ENTERPRISING FARMERS--ALFALFA—IRRIGATION —MILK AND HONEY— FARM MACHINERY— FINE STOCK—POULTRY—RAISIN VINEYARD— CORN—WHEAT, ETC.

EDITORS CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL:—Thinking a few items from this part of California would be of interest to your many readers, and leaving it to yourselves to say if they are worthy of publication, I venture the following:

Woodland is a stirring town of about three thousand people, situated seventeen miles northwest of Sacramento, and on the line of railroad from the latter place to Knight's Landing, and is surrounded by some of the most productive land I have seen in the State, and if not for the heat and hot North winds I should consider it the Farmers' Paradise. In this vicinity are large bodies of white oak lbs., per acre. Thrashers are now at work on clover seed, but there are many fields that will make another crop of hay in a few weeks more. The beautiful green clover and the delightful fragrance from the blossoms has to be seen and enjoyed to be appreciated.

The wheat crop has been good for this season. Summer-fallowing is in general favor here, lands so treated yielding from 30 to 40 bushels, when winter sown yields but 15 to 25. The gale of last spring did serious damage to wheat, consequently many are looking for a variety that will ripen after the high winds cease. Proper wheat has been a favorite seed, but its ripening too early makes it objectionable. Club seems to be the choice of many for next season.

Last week I saw on the farm of J. Fowler a fine sight of 70 acres of corn of different Hogs are kept on it the year round, and a drove of 100 is a common sight. In this vicinity there are between 2,000 and 3,000 acres of clover. It makes an excellent article of hay when properly cured. Dairying is not carryed on as largely as it might be, but there is no reason why this county should not be the "Orange County" of California.

Farnham is one of the largest and best butter makers here. He makes about 100 lbs., a week, and for color and flavor it cannot be excelled. Alfalfa clover also gives the bee keeper great advantages; I saw 60 lbs., of delicious honey made in three weeks taken from two hives.

Many Alfalfa clover fields this season have yielded 5 tons of hay per acre, besides a large amount of pasturage; others, 3 or 4 tons besides a crop of seed varying from 200 to 300 press to you the many advantages of these clover fields.

Every thing seems to thrive on Alfalfa. Here are to be seen fat animals, clover-fed. verts to irrigation at once. I can hardly extrees, which no doubt gave the name to the town. Shade and ornamental trees do not thrive as at Santa Clara. Live oaks are a rarity.

The Farmers of this section show an enterprise that might with advantage, be a copy to farmers in other portions of the State. To add to the natural productiveness of the soil, they make use of the waters of Cache Creek for irrigation, and if some of our dry land farmers could see the Alfalfa clover fields now growing a third crop, they would be convarieties, some of it planted 25th of June and growing from 5 to 11¼ feet high. The soil, with proper cultivation, would produce 100 bushels per acre.

Land here is worth from 20 to 200 dollars an acre according to location and improvements.

Farmers are using the best improved machinery. For thrashing, Enrights straw burners are being introduced. Here, also, derricks with horse forks are used with nearly all thrashing machines, also Jackson's self-feeder and elevator; a great labor saving machine. I have seen Jackson's Traction engine used for thrashing, propeled over a rough road and drawing separator, traps waggon, etc. Derrick's (I think it is) Perpetual hay-press is in favor here. It makes compact bales that I have not seen equaled. Ten tons of it can be stowed on a single railroad car.

I have visited the poultry yards of Dr. J. W. Prather, and though his choicest birds were away to State Fair, I saw enough to satisfy me he has very choice poultry. His yards are located in clover, so his poultry have green feed the year round.

Before closing this I must mention the farm and vineyard of B. B. Blowers. I saw sights there that would astonish even old Californians. Mr. B. has 25 acres devoted to table and raisins grapes, and if wine men would visit his vineyard and see his "lay out" of raisins, no other argument would be needed with such of them as desire prosperity and have the good or their race in view. For bearing, size and flavor of Mr. B's. grapes and raisins, it will be hard to equal them anywhere. I saw vines bearing a second crop that had on at least 40 lbs., of grapes! Mr. B. dries his grapes on the ground, but this year he is trying a cement floor in the field. He has 700 yards of this floor already, and so constructed that in case of a rain, water will drain off quickly. I also saw the effect of two methods of prunning of one kind of grape vine. One way caused the vine to be almost worthless as a bearer, the other made the same variety very prolific. From 120 lbs., of grapes, Mr. B. has made 45 lbs. of raisins.

There again I saw clover fields and the effect it had on stock, especially in its wool and mutton producing qualities on some graded Merino sheep belonging to Mr. B., also some of the get of buck, "Silver Horn." A lot of Merinos imported from Vermont and owned by Mr. George Hammond were very fine. A lamb 7½ months old get of "Vigor" of Ohio weighed 107 lbs. On 10 acres of clover, Mr. B., has had for five months, 150 heads of sheep and 10 of cows and horses, and there will be feed enough for months yet. Mr. B., discovered that cattle and sheep that had access to his grape cuttings—of which they ate freely in the spring—did not bloat, showing perhaps, that stock running on succulent *clover need dry feed* as well. Much more might be said of this Yolo County, but fearing I intrude on your space, I close.

Yours truly, A. R. WOODHAMS.

WOODLAND, YOLO CO., Sept. 20.

The Old Saying: "There is no peace for the wicked" may be all correct, but it seems as though there was little for those who righteously choose to escape from the wicked in this vicious age.

The settlers at Lompoc made their by-laws, forbidding the sale of alcoholic liquors within the colony, with an honest and earnest desire to live in peace, and bring up their children in security from the worst foe to human happiness. They had a right to do this, and now they propose to maintain that right; we hope they will. But through a loop-hole in their by-laws, the enemy was admitted into their midst and the fight has commenced. The war with alcohol can never be ended short of total prohibition. Between it and abstinance there is an irrepressible conflict One or the other must fall.

The Lompoc colony by-laws permit the sale of alcoholic preparations by druggists upon the prescription of a physcian. A saloon keeper has only to start a "drug store" and either be a "physician" or else have a confederate capper to carry on the vile business there. This game has already been commenced as we published in a correspondence last month, and the ladies revenged the death of an innocent victim by spilling the liquor in the whisky shop, after the keeper had refused to comply with the request to sell no more as a beverage. Now "legal redress" is demanded by this trespasser upon peaceable society, and, as law seldom means justice in this country, it is impossible to foresee the result. The malicious liquor men will go to any length to crush out temperance in any form so threatening to their "business." Unscrupulous of lawyers can be found to hound the people, and, if they will stand it, they will be driven to allow whisky mills to triumph over them. We can only council one thing; let your by-laws mean *total prohibition* and fight it out on that ground in defiance of any power that whisky can command. The eyes of the world are upon you, and every temperance man and woman in the land will glory in your indomitable determination to maintain your inalienable right to life, liberty, and the pursuit of happiness.

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Sewing Machines—G. L. Bigelow.
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Dentist—Arthur Gore, Santa Clara.
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California Agriculturist and Live Stock Journal.

S. HARRIS HERRING & CO.,
Editors and Publishers.

OFFICE: Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

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" half Column	8 00	" "
" fourth Column	4 00	" "
" eighth Column	2 00	" "
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The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

Of What Does Greatness Consist? Not notoriety, surely. Neither is it riches. Yet as much renown may be gained from, and as much homage may be, and often is paid to these, as to every virtue and power of mind that distinguishes the noble from the common class of humanity. Probably scores of men die every year, as they have lived, comparatively unnoticed, who are as wise, as virtuous, as self-sacrificing, as philanthropic, and who have worked as faithfully for the good of humanity as the late great Ralston of the great Bank of California. But they were not as rich in this worlds goods.

We must express our condemnation of the system of assessing nominees for State, County and town offices to pay campaign expenses. It all leads to corruption and abuse. How can we ever expect to lessen taxation when such a system is tolerated? Even the enormous salaries and perquisites now paid officers are barely sufficient to pay assessments. How can they get even but by being open to bribery and favoritism? So long as such things are permitted by law, we cannot expect economy of Government in any of its branches, nor fair dealing and justice in our courts.

Work-horses on the farm should not be allowed to fall off in flesh this month for lack of feed in stubble fields and pastures. A feed of hay, or even good fine straw once a day will pay, if it is needed to keep them in good order for the seasons plowing. Look to your horse collars, that they are in good condition and see that shoulders do not get galled and sore. Be merciful to the beast.

A Successful Attempt at seed growing has been undertaken this season near San Jose. Mr. R. W. Wilson, who has had many years experience at seed growing in New York and Iowa, put in 30 acres of onions and lettuce for seed. He produced about 9,000 lbs., of lettuce seed for Briggs Brothers, seedmen, Rochester, New York, and over 8,000 lbs., of onion seed, not contracted for. Mr. W. is now East to dispose of his crop, and to contract with seedsman to take a large crop another season. Mr. W. says that his seed produced here this season is the best and heaviest that he ever saw, and that such a good quality cannot be grown East. He was not fortunate in selecting soil that could not be irrigated either, as the season was exceptionally dry and the crop was not as heavy as it should have been. Another season this will be remedied. His success is of the most encouraging nature however, and no doubt should exist in the mind of any one as to the superiority of our soil and climate for seed raisng.

The Cultivating Fruit for Stock should attract more attention than it does. In some portions of the eastern states sweet apple trees are grown around pastures to produce fruit for cows and it is found to pay well. The cows give a superior quantity and quality of milk when fed with fruit. We have several times suggested that it would pay to plant grape vines about grain fields to furnish succulent food for hogs while fattening upon the grain. We learn that one farmer who has tried it, strongly recommends feeding grapes to hogs as a cheep and economical feed with grain. The Arabs it is said, feed grapes to their horses, which fatten on them.

Where alfalfa and squashes, and other vegetables can be grown cheaply and abundantly, perhaps it would be more economical of land and labor to cultivate them for feeding stock, than to plant grape vines for the purpose. But on dry ranches, the grape will be found just the thing. It requires little cultivation, pruning once a year being about all the trouble necessary to insure regular crops. The mission grape is an abundant bearer and will probably be found as good as any for this purpose.

Grapes are now abundant and cheap and of excellent quality. Other fruits having been scarce and dear this season, we can appreciate this "gift of the gods" all the more. There is no more luscious fruit than the grape; healthful, nutritious and bountiful. The grape vine will grow almost anywhere it may be planted and the fruit can be grown with less expense than any other on an average. It is a blessing to the world in its natural and health giving forms, but when fermented in vat and still, the product is distructive of virtue, fortune and human worth. The noble grape is not to blame for the vile use to which demoralized man may subject it.

The grape should be found daily upon the table of every family during the season of its ripeness. Put up fresh in cans as other fruit is, it will be found a superior table fruit the year round. Several fine varieties of fleshy grapes make excellent raisins. Raisins in some countries are a staple article of food, and should be more largely eaten in our own. They are very nutritious and healthful for man or beast. California should now, and probably will in years to come, supply the whole of America with superior raisins. It is estimated that 40,000 boxes will be produced this season. When selected with care and properly cured, California raisins are not excelled by any others.

The Lick Observatory, will probably be located upon Mount Hamilton in Santa Clara County, distance about 25 miles from San Jose. Mr. Lick has promised to build it there if our county will build a good road to it from San Jose, which we have no doubt will be done at once. A telescope of immense power, much greater than any ever made will be placed upon it, at a cost of nearly, or quite, one million dollars. This princely donation to science and to the advancement of mankind, will most likely develop facts that will settle many points about the planets and other distant stars, which are now shrouded by conjecture. The moon will be brought to vision close enough, so that objects upon its surface the size of a common dwelling house can be discerned.

Photographs upon delicate material can be taken and so magnified as to make objects the size of men appear plainly, for examination; at least there is nothing scientifically impossible about it. We believe that it will yet be so that the inhabitants of even the planet Mars, can be seen through these agencies. At any rate, it is devoutly to be wished, and the prospect of adding to our other attractions such an institution as the Lick Observatory will be, makes every resident of San Jose feel elated. Long may Mr. James Lick live, must be the sentiment of all.

Horse Racing at our agricultural fairs does not appear to be growing less in favor with the sort of crowds that attend such fairs, nor with the the managers of them, who appear to think that to be *successful*, a fair must be so managed as to bring together the biggest possible crowd of people and cause them to squander their money. The *National Live Stock Journal* in some sensible talk on horse racing says: "that money thus distributed, *does not encourage improvement in agriculture*, nor tend in the *least degree* to improve, in any useful characteristic, our domestic animals," and continues: "It is probable that the only way to effectually guard against this evil, is to adopt what has always been the practice at the New York State Fair; that is, *to prohibit all tests of speed!*" This would be a radical measure. We have never opposed the simple test of speed, but have always deplored the gambling, pool selling, etc. However, we would sooner see a prohibatory law, than witness any more of the demoralizing effects of horse-racing "Agricultural Fairs." A fair that is a gambling game cannot in any proper sense be called *agricultural*.

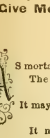
The San Francisco Board of Provision Packers advises the farmers of California to fatten hogs with their wheat, as $1,400,000 gold was sent from that city last year to buy Eastern pork and lard.

Poetry.

[For the CALIFORNIA AGRICULTURIST.]

Give Me the Hand that is Friendly Forever.

BY AGNES.



S mortals advance into life's deepening shadows,
The need of true friendship we all must confess;
It may come from the hand that is destined to labor,
It may come from sweet childhood which lives but to bless;
Yet soft palm, or hard hand, it matters not never,
Give me the hand that is friendly forever.

In the whirl of life's duties, we fail to remember
The many demands human kindness requires,
And greedily gather life's blossom and sunshine,
Whilst broken hearts perish and friendship expires;
Then soft palm, or hard hand, it matters not never,
Give me the hand that is friendly forever.

When fortune her jewels profusely bestows,
We cling to our idols and hold them in fear;
Lest friends may prove traitors, and cunningly rob us
Of much that makes living desirable here;
Then soft palm, or hard hand, it matters not never,
Give me the hand that is friendly forever.

We cast our thoughts round us and proudly exclaim,
Our friends are as legion, they'll surely remain,
But fortune escapes us; disease comes in train,
When nothing is left us but suffering and pain:
Then soft palm, or hard hand, it matters not never,
We'll cling to the hand that is friendly forever.

Sowing and Reaping.

A sower went out to sow one day,
When a city maiden chanced that way;
A sweet, wee maiden with just a trace
Of lingering babyhood in her face,
And she paused where the farmer sowed his grain,
And uttered a cry half joy, half pain:

"What beautiful things, so golden red
And shining! Pray! are they gems?" she said.
"And why do you bury them underground
Where never a sound of them may be found?
They'd be so pretty for dolly and me
To play with under the beechen-tree!"

"Now, Heaven forgive me!" the farmer said:
"But, child, my little ones must be fed!
Why, this is corn, and I plant it here,
That I may have food for them all next year.
Should I see them starve and die instead?
Nay, but my little ones must have bread."

But still the child, with a wistful glance,
Kept watching the treasure half askance,
As it dropt from his hand like drops of gold,
And buried itself in the silent mold;
So he paused and gave to her handfuls twain
Of his scarlet beans and his golden grain.

"True, it is little the likes of me
Can spare from the children's bread," said he:
"But God provides for the sparrow even,
And I am on earth and He is in heaven;
He will send his sunshine, and dew, and rain,
And give me back my own again."

A rustle, as if of a silken gown!
Or was it a bird a wing sweeping down
From yonder thicket of beechen-trees,
Or a sad-cap freak of the soft spring breeze?
What mattered it? So, with a glad content,
Again to his toil the sower bent.

—Months passed; God's beautiful sun and rain
Their yearly miracle wrought; again
The farmer stood in his field, but now
With a grateful heart and reverent brow,
For a plentiful harvest around him smiled,
And his thoughts went back to the little child.

"Sure, never was field so blessed before
As this," he said; "'twas a scanty store
I gave the maiden; but who divides
With others, a blessing with him abides"—
And his lips grew glad with a grateful tune
In the hush of that autumn afternoon.

But, see! as he gathers his fruitful sheaves,
What treasure is this among the leaves?
A silken purse! in its lustrous fold
Ten shining pieces of solid gold!
How came it here, like a gift of God,
Where never a foot but his own had trod?

Again a stir near the beechen trees!
But this time neither of bird nor breeze:—
A lady! clad in a wondrous sheen,
Of silk and gems, like an Eastern Queen;
And, close to her side, the little child,
Sweet thoughts of whom had his toil beguiled.

"It is yours, my lady"—he raised the gold—
"Nay, keep the treasure," she said, "behold,
God sends it you! It was surely He
Who led my steps by the beechen tree
That sweet spring morn when you shared your seed
With one of His little ones at her need.

"And so, if He designs to use my hand
In sowing His seed—(you understand):—
Giving me all that I want and more,
From out of the overflowing store,
Should I not scatter of here or there?
Shall you bless others and I forbear?"

O beautiful Gospel of human need
And human sympathy! Here, indeed,
Together the rich and poor may meet,
Each with his offering, helpful, sweet;
Nor this too costly, nor that too small
With Him who is Maker of us all.

Good Farmer James.

If you had known good farmer James,
Whose life in ways of labor ran,
You would have known of sterling worth—
The virtues of an honest man.

He never traveled far away;
A foreign shore he ne'er had seen,
And all his life was humbly passed
Where his forefathers' lives had been.

His fields were ample for his wish,
And yielded crops, with some to spare
For those whose lives were sorrowful
With sickness, poverty and care;

For 'twas his pleasure to assist
In every way the worthy poor,
And when the suffering came his way
No bolts were found upon the door.

Yet idleness ne'er found a friend
In Farmer James. Sloth was a vice;
And carelessness and levity
Were wrong and sinful in his eyes.

His was the ever constant aim
To help his fellows all he could;
And ne're was he so happy as
When to his neighbors doing good.

His life was simple from the first,
And when it ripued to its close,
And he was laid away, for him
No word but that of praise arose;

For he had left a legacy
Richer than gold and jewels prove—
A legacy of honest worth,
Of noble actions, and of love.

A Rainy Day.

BY ALFRED B. STREET,

The bright rain-tassels of the skies
Drop from their cloudy, leaden crown;—
And like a sponge the landscape lies
Reeking and sullen, dumb and brown.

Bushes and trees their leafy hands
Clap, as each drop their surface pelts; —
The surly hemlock, twiceling, stands
Like Fowler in a haze of gnats.

Under the rumbling cart that stoops
To drink the pool that mantles round,
Drawn to one crescent feather, droops
The curless cock, a king discrowned.

Dame Partlet in her brindled hues
Sits tamely by and preens her breast;—
White poor, drenched Tabby pevish mews
Beneath the woodshed's dripping crest

Within the dusky half-light there,
See-sawing pigeons pick the oats;
There leans the spade, and glints the share,
Dull grins the rake, the buck-saw gloats.

Moist wood-scents wander in the breeze,
Mixed with the garden's dampened sweets;
And the wet fragrance of the trees,
The rainy flail forth ceaseless beats.

The ducks roll up belighted eyes;
All talk at once, their feather's shake,
Even seek to fly, then each one plies
Way on the flowing cistern's lake.

The cow stands swinging meek her cud,
And wistful eyes the meadow near;—
While Whitey shows in many a bind
Impatience of his stable drear.

And still gray tassels streak the air,
And rumble still cart, barn, and shed;—
Rain, weary rain, falls everywhere,
And nature drenched looks dull and dead,

How desolate the sodden field!
The rubbing tree stands dank and dark;—
The fir's firm bongbis no covert yield,
Though curving tent-like round the bark.

From the wet stack the vapors shrug;—
Within yawn coverts warm and dry,
Where Brindle shelters sleek and snug,
Protected from the frowning sky.

The cottage door, swung open, shows
The streaked dusk scene within; there sits
The grandsire where the chimney glows,
Puss purs, and there the grandson knits.

The tottling grandchild rides the dog,
Or arrikes him whimpering with his whip;
Sport yells when fired on by the logs,
Then upward starts and bites his hip.

There ticks the clock with endless swing;
The wood-chairs gleam in crimson gloss;
The kitten gambols with the string,
While the domed drops the panes emboss.

The rainy day, though desolate,
Prophetic tells to-morrow's light;—
Like tears of sorrow that create
The bow which makes all nature bright.

Going After the Cows.

They waited there, by the pasture bars—
Dapple and Dolly, and Dun,
So I slip the bars in the well-worn posts,
And drop them one by one;
But I do not go, as I always go,
To see the milking done.

I lean my cheek on the pasture bars,
And watch the stars come out;
Perhaps they will miss me, up at the house,
And wonder what I am about;
But I've something to think of here to-night
While I watch the stars come out.

Last night when I came for the beauties,
Willie was walking with me,
And he asked me if I thought ever
A farmer's wife I could be;
For I am a city girl, you know,
And a farmer's son is he.

Willie wears home-spun trowsers,
And such a course straw hat!
But he face that looks from under the rim,
Is handsome and brave, for all that;
And his eyes, they look at me so queer
That my heart goes pit-a-pat.

Every night, when the work is done,
We sit in the twilight gray—
Willie and I, in the tvied porch.
And sing the hours away;
I think it's better than opera,
Or theatre, any day.

He said last night, that the summer
Is brighter because I am here,
That his work was never so easy
As it is when I am near—
And he said—but there, I won't tell,
Such words are too sacred and dear.

How pure is the breath of the clover,
That comes from the meadows mown!
How holy the sky above me,
With the twinkling lights full sown!
No wonder that Willie is better
Than men who live in town.

So I think I will stay in the country,
With Dolly, and Dapple, and Dun;
Perhaps in the far, sweet summers,
They would know should I fail to come,
In the dewy-eve, to the pasture bars,
To drop them, one by one.

The Grasshoppers' Raid.

BY EUDORA MAY STONE,

The 'hoppers came down like a wolf on the fold,
Where the corn and the wheat fields were emerald and gold;
And the sheen of their wings was as snow in the sky,
When winty clouds gather, and north winds are high.

Like the blades of the grass, when the Summer is green,
The corn and potatoes, at sunrise, were seen;
Like the prairie in Autumn, where fire has swept through,
The fields were laid bare ere the falling of dew.

And the grasshoppers spread their broad wings to the blast,
And ate every turnip and beet as they passed;
And the onions and peas that were thrifty at dawn
Waved but once in the wind, and forever were gone.

And there lay the radish, all scarlet and white,
But its "grasshoppered" leaves were a pitiful sight,
And there stood the rhubarb, so sadly bereft
That, alas! there was only its skeleton left.

The farmers of Otoe are loud in their wail,
The children are sad and the hoe wife is pale;
And the corn and the wheat fields, unmade by the knife,
To the ravenous 'hopper have yielded their life.

Farmers will always remain poor so long as they allow others to do their thinking.

SOME EFFECTS OF THE EXCLUSIVE ONE-CROP SYSTEM.

The Georgia State Agricultural Department is doing a good work, in collecting facts and presenting them in a digested form for the consideration of the farmers of that State. Geogia, like other Southern States, is cursed with the one crop system, but instead of that being grain as in California, it is cotton. But that makes no difference. Either cotton or grain raised exclusively, to be depended upon for everything that is consumed on the farm, is equally extravagant. The one crop must be sold to purchase everything else used; in California even the flour is bought with wheat sold in market.

The economical plan of farming, is to produce as nearly as possible whatever is demanded for home use. Of course the surplus, whatever it is, should be that which will bring the most money from a given number of acres with the least expenditure of labor and money—everything else being equal. In the Southern States, that surplus undoubtedly should be cotton, as a general thing, In California it may be wheat or barley, hay, stock, fruit or something else, as locality and soil and climate and irrigation facilities may determine,

The effect of the one-crop system upon the producer, the so-called farmer, has proved to be most disastrous in the South, and so far as we have observed, it is drifting in that current in California. Certainly the most prosperous farmers are those who come as near following a diversified system of farming as their farm will admit of, and those who manage to find something for themselves to do on the farm the whole season. There is no profit in idleness half the year, and no one-crop will give constant employment.

Besides, the one-crop farmers are generally in debt, paying enormous profits to the storekeepers who carry them through. Equal to at least 25 to 50 per cent interest.

As in a large measure applicable to the one-crop system in California, we append the following extract from the report above referred to:

"33 per cent of the cotton crop is virtually sold to pay debts before it is made.

"Only 20 per cent of the farmers buy entirely for cash, while the 50 per cent who buy on a credit pay at the enormous rate of 44 per cent per annum interest on what they consume, amounting, in the aggregate, in the State of Georgia, to the astonishing sum of $4,250,000—*four and a quarter million dollars* paid by the farmers *in interest* on what they consume. Is it remarkable that farming is not profitable under such a suicidal policy? No legitimate business can pay 44 per cent per annum on the capital necessary to conduct it, and live.

Another instructive lesson taught by the above answers is the fact that 80 *per cent* of those who raise their supplies make a profit, while 75 *per cent* of those who buy lose money.

"The difficulties teach their own lessons, and suggest their own remedies:

Experience and these facts teach that, *raising cotton to buy supplies to raise cotton, at present prices, leads directly to bankruptcy and ruin.*

That those who *raise their own supplies make cotton at a profit, and are prosperous.* Indeed, correspondents generally report that those who raise their own supplies *cannot lose money*, if they attend to their business.

"Under the present system, *six and a half millions of dollars* which should go to swell the annual profit of Georgia farmers, find their way into the pockets of others, mostly beyond the limits of our State, in consequence of the suicidal policy at present pursued, of buying what should be raised at home. Will not our farmers make their farms self-sustaining—raise their supplies and pocket these profits?

Discard the old habit of boasting of the number of acres planted, the number of plows run, or the number of bales of cotton made, and look well to the number of *dollars of clear profit.*"

THE USE OF DRY EARTH.

We are requested to again call attention to the importance of using dry earth to prevent the bad and dangerous odors and emanstions from privies and other accumulations of filth near dwellings. It is undoubtedly a subject of more importance, than any person not conversant with it would suppose. It is not at all necessary that a foul nuisance should be tolerated, where persons must inhale noxious gasses loaded with the germs of disease and death, and which are foully disagreable as well as repugnant to every delicate sense of cleanliness and decency. And yet, stinking privies are the rule in town and out, and will be probably until prohibited by some legal enactment, as they should be, for the public good. It is no sign of want of intelligence even, to find such a thing close to one's dwelling, but because they have become an institution, as it were, like many other evils which are tolerated, and are too common to elicit either particular thought or comment; they are passed by as a natural consequence.

Now it is the simplest thing in the world to remedy this abomination. The old privy building need not be torn down—and may be even drawn nearer to the house or woodshed. It should in fact be placed in a position where it can be entered in fair weather or foul, night or day, most conveniently by the family. But instead of a vault, have made one or more strong boxes that can be drawn out when filled from the side or back of the privy house and dragged to the vegetable garden or some suitable place for emptying.

A board can be so fitted as to slide in place when the empty box is replaced, so that there will be no exposure of interior arrangements. A barrel or other vessel should be placed inside the privy building, to contain pulverized dry earth. In this should be placed a dipper, shovel or scoop, to cover the excrement. Each member of the family should understand that it is their duty to always cover at once with the earth. Enough dry earth to absorb all moisture should be used, and it will be found best to not throw liquid slop into the privy boxes, but turn it on to the earth outside; have a place spaded up where it will be at once absorbed away. This earth will become enriched, and may in time be removed to the garden for fertilizing purposes. No family that tries this will be satisfied with a foul smelling privy on the premises again ever. The trouble will be more than repaid in cleanliness and comfort.

The patent earth closets are very nice for house use where there are invalids and infirm persons, and with proper care are in no way offensive in any bath or sleeping room.

A kerosene can, with top cut out, and the bail of an old pail fastened to it to carry it, makes a good vessel, and a box can be made to contain it with a hinged top with a hole through it, and another lid, also hinged, which can be covered to resemble an ottoman. The box should be long enough to contain another can filled with dry earth, to be used as required. There is no patent on this piece of useful furniture, and any man or boy can make one.

Dry earth can now, before the heavy rains, be obtained in any quantity in roads, fields, and almost anywhere. Road dust is excellent. It can be stored in outhouses by the wagon load in large boxes, barrels, etc. It is not only good for the purpose named, but is found to be excellent to use in stables, quite as good as saw dust or tan back. A quantity in a large shallow box for hens to wallow in during the winter, will be found excellent to relieve them of vermin. As a disinfectant and absorbant of putrid odors and matter in sores, dry earth has been found to be very excellent, and medical practitioners have largely adopted its use in many cases, where usual remedies are unavailing, and with most gratifying results. But of this we only make mention. The virtues of dry earth, as a sanitary agent in privies should commend its use to every lover of decency, and "*now* is the accepted time."

AN ENDORSEMENT.

"My faith in its honesty, candor and devotion to the interests of the farmer strengthens with every number."

As a sample of the many encouraging words we are constantly receiving in private letters from our subscribers, we take the liberty to publish the following:

Editor Agriculturist—*Dear Sir*:—I enclose herewith, Postal Order, for $4.00 in payment of amount due on subscription—the balance to be applied in prepayment, after deducting one dollar for "How to Paint," which please forward to my address by mail. I have been weeding out my periodicals, and have struck several from the list, but I could not spare the Agriculturist. My faith in its honesty, candor and devotion to the interests of the farmer, strengthens with every number, and I am only sorry that I cannot say that of other agricultural journals published on this Coast.

You have my best wishes for your success, and I remain as ever, a friend to the little monthly. R. G. Dean.

Antioch, Sept. 9, 1875.

"A LITTLE MORE GRANGER TOO."

The poor "wine-growers" of California, hoping to flounder out of the mud of despond have sought for relief through the grangers. They want to establish Grangers' wine and brandy manufacturies, and to sell their products through grange agencies, etc. A little grange sugar is needed to sweeten the business and make it respectable. Probably the "growers" think that a little grange manipulation will make the stuff "as milk for new born babes" and add other virtues fitting it for the use of Christian families, and making

it really fit for the Gods! The alcohol it now contains, which is the one thing that makes it desirable, will be deprived of its drunkening qualities or power, and be harmlessly exhilerating and charmingly extatic in its manifold goodness. Partakers thereof can then get glorious without getting drunk, and then growing appetites for something stronger will lead only to a harmless indulgence in a little more granger wine and brandy.

WARNING TO IMMIGRANT LAND PURCHASERS.

Strangers should understand that so-called immigrant-aid agencies, claiming to be connected with the Grangers, or officially created by the State, are frauds, the object of which is to sell the land of private individuals at extravagant prices, the agents of the so-called societies participating largely in the profits.

The above we clip from the San Francisco *Real Estate Circular*, and endorse it too, although some of the "leading" head grangers have, along with the leading grain monopolist of the Pacific Coast, endorsed Josiah Earle's Grange Agency, notwithstanding the exposure of the Earl "Inyo Grab" and other swindling land complications. We have heard the term, "stealing the livery of the Lord to serve the devil in," applied to many things, and think it might with pertinance be used to fit the many cheeky and self-assuming people who use the word "granger," to carry out schemes of imposition to feather their own nests. We think it high time to cry out against such abuses, and so far as we are concerned, we have seen enough to make us look with suspicion on any branch of business that bases itself upon the word "granger."

We are not by any means fighting against grange principles, we believe in them in their highest interpretation; but that class of middle men who are natural suckers, and who wedge themselves in to parasitically feed upon the confidence and credulity of honest people, whom they deceive by false pretentions and by misrepresentations, we have neither love nor respect for. We advise such as would avoid middle men, to deal directly with first parties in land and other matters. And further, that if they seek to transact business through agents—as is often the most convenient and best way—to look for such men as are able to honestly stand upon their own merits, and who have too much honor and human modesty to sail under any patronizing flag.

We would louldly warn emigrants, and others, to keep a sharp eye on all pretenders. The most villianous land sharks in existance can be found in California.

OF WHAT ADVANTAGE IS IT?

We are asked of what benefit to farmers is the so-called "Grangers' Bank?" Can a farmer in need obtain money on any more favorable terms from this bank than from others? Will they require any less mortgage or security, and will the giving of such security cost less than at other banks? Will the Grangers' Bank in a measure lower the rates of interest so as to encourage industry, and more nearly equalize the powers of capitol and labor instead of bolstering up speculation and usury? Now these questions are certainly to the point, but with the best information we can get on the subject, we cannot give a favorable reply. The money in the Grangers' Bank is furnished by stock-holders, who expect to get as good, or better returns than through any other source. The bankers are bound to favor themselves and their stockholders and depositors in preference to anybody else. The saying that "corporations have no souls," looses none of its significance when applied to the Grangers' Bank. The name, and the means of acquiring capital, have given to the bank and bankers power which they could not well have acquired without it. The poor "grangers" have to carry a big load when they shoulder banks owned by ambitious individuals and controlled so as to make money out of the people; and real estate offices conducted on the same selfish principle, and business concerns that are looking more to their own profits than to anybodys else good.

An unselfish co-operative concern, conducted upon a code of principles that are truly equitable and in the fullest sense co-operative, would undoubtedly be of much benefit to the people who might patronize it. Anything less than that is not, as we can see, much improvement over the old ways of doing business.

If we are mistaken in our estimate, we would like to be set right in the matter.

STARVING STOCK AND BURNING STRAW.

We see by our exchanges that feed is getting so short on the sheep ranges in Tulare county that many thousands of sheep are in danger of starvation. It has been the practice of grain-growers in that vicinity to burn straw—thousands of tons of it every season, instead of stacking it for the use of stock. To be sure the grain-growers and sheep-breeders are different persons; but is it not equally as disastrous to burn the straw as though straw and sheep all belonged to the same person? If care was taken to save the straw in the valleys, it would feed, in dry seasons and in winter, all the stock that the mountains could pasture during Spring and Summer. Straw in stack a dozen years old is better for stock than new straw, and we believe it would pay any grain-grower to stack his straw for stock, and when it is needed sell in stack to sheep and cattle herders. Is it not a crime to destroy feed by fire, and starve stock for the want of it?

A School Girl's Ideal.—Grace Hunter writes to the *St. Nicholas* for August:

"I want to tell the girls something. It is about a good use for the frames of old umbrellas, sunshades or parasols. You just open them, strip off the silk, sharpen the handle to a point, and thrusting them open in the ground let them serve as trellises for vines. Last Summer we girls had a lovely sweet-pea vine growing over mother's old parasol frame and a balloon vine training over father's old castaway umbrella. They were lovely."

"I have lost flesh," said a topper to his companion. "No great loss was the reply, since you made it up in spirits."

FARM LABOR IN CALIFORNIA.

We have several times expressed our opinion on the subject of farm labor and laborers in California. The following from the Sunday *Chronicle* gives a very correct idea of the general condition of things as at present existing. What is said contrasting our labor-system with old-time slavery is not our idea, but the balance we think not overdrawn:

The system of farm labor in California is undoubtedly the worst in the United States. It is bad for the farmers themselves, and worse, if possible, for those whom they employ. In many respects it is even worse than old-time slavery. That, at least, enabled the planter to know what labor he could depend upon in any emergency, and made the laborers certain, at all times, of shelter, clothing, food and fire. Our system does neither. The farmer must take such help as he can get—hunting it up when most hurried, and paying whatever is demanded. The laborers themselves, knowing they cannot be permanently employed, demand high prices, do their work carelessly, and start out on a tramp for another job. Under our system, large numbers of men are wanted for a short time—more than any ordinary farmhouse can accommodate, even if the employer dare trust so many strangers within his walls, or admit them into his family circle. The result is that laborers are compelled to sleep in barns, outhouses, or in the open fields. In this climate that is no hardship, it is true, but the practice leads to uncleanliness, carelessness of appearance and recklessness of conduct. Men seem thus to have been thrown outside of social influences, and even if at the outset possessing good impulses and habits, they become in a short time desperate, degraded and criminal and perhaps all three. They are no worse than almost any others would become under similar influences. They are shut out from all the purifying influences of society and home as effectually as so many sailors or soldiers. What wonder is it, then, that five out of six in the class of farm laborers, unemployed for half the year, become worthless, drunken and dissolute tramps and outcasts? There is no condition in life more unfavorable to the morals of men than that which great numbers of our farm laborers occupy. They annually squander in dissipation, and generally do it in a few weeks, all they have earned, and hang around the towns and cities the rest of the year, hunting odd jobs and living, pecuniarily, from hand to mouth—not seldom by charity. There are exceptions we know. Here and there a man having sterner stuff or more intelligence in him than the rest, will rise above the wretched position that he holds and become a useful citizen. But that system is certainly a bad one that subjects laboring men to such degrading and damaging influences. And yet, bad as it is, and as intelligent farmers admit it to be, we see no present remedy. When our farms become something else than wheat fields and are made to produce a greater variety of crops, requiring labor at all seasons, the owners can furnish steady employment to thousands who are now compelled to be mere tramps under the pressure of dire necessity. Until that time comes we see no prospect of any improvement in the condition of farm laborers.

The other day I was planing a board, and by accident planed one shaving the wrong way of the grain. Of course the surface was left rough. Turning the board, I noticed that it took more than one driving of the plane to get the surface smooth again. It was necessary to go over and over again. "There," thought I, "is life illustrated. One wrong stroke cuts deeply and roughly. An evil deed eats like a cancer. Long, weary years hardly efface the errors of a day."

Correspondence.

Letter from a Lady-Canvasser.

FLUME CAMP, Santa Cruz, }
Sept. 7th, 1875. }

DEAR HERKINO:—Bright and early yesterday morning Pony and I left Santa Cruz with a roll of the "AGRICULTURISTS," for a canvassing trip up in the vicinity of Felton. The new railroad was met, or rather first came in sight at a point some ninety feet above the road on the left, immediately opposite Mr. Peyton's fine residence which is in process of completion, above the powder works crowning the hill on the right. So gradual is the rise on this delightful road, that it seems almost incredible that the level so indispensable for railway travel can be maintained with the road at first so far up on the mountain side, and then crossing the road several times on trestle work, finally on a level, then gradually winding far below, following the bank of a stream till several times lost amid the growth of foliage, which seems like underbrush; then approaching nearer in view, passing through a short tunnel and coming into Felton side by side with us.

Here, leaving the well-watered road, with its cool shade of lofty trees which made the ride so enjoyable, we passed on through the dust toward Flume Camp. Upon leaving the terminus of the railroad, the flume became the chief feature of the landscape, with its high scaffolding lifting it at times above 90 feet from the surface of the land or stream, and again coming down to level ground and laid in cuts to the depth of ten or fifteen feet. It is a wonderful enterprise and the projectors deserve much credit, and will doubtless reap a rich reward. Flume Mill is located fifteen miles away, from whence lumber is floated, as fast as sawn, for completing the structure.

A mile out of Felton I found the camp where the employees were fed and sheltered, and near by rose the white tent of our friend. He was busy on the Flume, but his delicate wife and sunny-haired May (a child of nine years) were revelling in the sunshine of their novel home, gaining health and strength every day, by the natural appetite and resting sleep resulting from a life in the open air.

Anxious to explore still farther before the heat of the day, we followed on over the dusty road till Lorenzo was reached. This was the town which sprang into existence, mushroom-like; when the Flume enterprise was first undertaken. A blacksmith's shop, store and post-office, hotel and saloon form the nucleus of a town in these parts, and by the noise of saw and hammer resounding on every side, one is impressed with the idea of growth and prosperity for this new settlement, to supersede the already well-established town of Boulder Creek, a few miles beyond.

Just at "The Forks" stands the Temperance House, kept by a former San Francisco merchant who, preferring the wild mountain life, has built himself a home in the wilderness.

It was here I partook of an excellent dinner and formed the acquaintance or one of your former patrons, who willingly renewed his subscription and paid the CALIFORNIA AGRICULTURIST a compliment most gratifying to hear. The list of new subscribers accompanying this letter is largely to be credited to assistance of its staunch friends.

Wondering what there might be to attract custom to a Temperance House in a locality where stimulating drinks are considered so essential to happiness, I ventured to suggest to the proprietor that the presence of good books and papers, pictures and the like might aid in rendering his house more attractive to all. He replied that there was no need of anything of the kind to call custom to his place, for even the drinking sort preferred a quiet place to get a comfortable meal and undisturbed rest at night.

Here, then, is encouragement to inn-keepers whose consciences are alive to the harm done by spirituous liquors. Temperance is defined as the moderate indulgence; but among a people who cannot discriminate between sufficient and over-indulgence, prohibition becomes necessary. Hence, the word Temperance is made to mean Prohibition, since it is better to restrict the appetite for anything which acts like poison to the living organism.

Coming back to camp and partaking of a sumptuous meal in the open-air dining-hall, which was adorned on every side with the most inviting landscapes, we wondered at our former in-door contentment, when here all nature was so calm and peaceful, with nothing to disturb the perfect harmony which prevailed. The moon shone calmly down upon us as we sat about the camp-fire, relating experiences and exchanging views on various subjects, till the feeling of drowsiness warned us it was time for sleep.

And thus ended the first day's exploits at Flume Camp. E. R. VAN V,

Weeds as Water Purifiers.

Mr. J. J. Mechi writes as follows to the London *Agricultural Gazette*: Into my pond runs a stream of twenty-five gallons per minute of pure water from a drain which I cut twelve feet deep some thirty odd years ago. Weeds will grow and thrive in this pond, and we have annually to take out large quantities of them. They look very beautiful as they grow in the pellucid water, which is used for household purposes. Said a visitor to me one day: "If you had a pair of swans, your pond would be free of weeds;" so a kind friend presented me with a pair, and very soon they cleared the pond, pulling the weeds up by the roots and feeding on them. My family were delighted with the graceful swans and the removal of the weedy obstructions to boating; but although the pond was free of weeds, the water was no longer pure and pellucid, but most decidedly muddy in taste, and when the steam issued from the kettle, the smell of mud was unmistakable. Well, no one thought it could be the swans, but at last I came to the conclusion, and, despite family and other remonstrances, returned them to their original owner. After a short period the weeds reappeared, and as they increased in bulk, the water gradually assumed its pellucidity and purity, and "Richard was himself again." What the weeds do for the water and its occupants the land vegetation does for the air; men, animals and other living creatures poison it, while vegetation absorbs the injurious gases, and reconverts them into wholesome food and fuel for man and beast, filling the atmosphere with that precious oxygen without which men and animals and other living creatures could no longer exist. So it is in the vast ocean, whose living occupants and vegetation probably exceed in quantity that which is on land. We owe to the river vegetation much of the purity of water. It is the excess of impurities from our towns which are beyond its powers of appropriation.

Leverrier has discovered another planet, which is his sixth.

Educational.

Going to School.

AH, the going to school in my girlhood,
In the little red schoolhouse so low!
By the flower-sprinkled pathway in summer,
In winter o'er crisp-drifted snow.
Oh, the freedom from care and from troubles!
There's to learning no royal road,
Yet the old-fashioned country children
Their way right royally trode.

How brimful of fun and frolic,
As well as of study were we!
My schoolmates—black-haired, brown and golden
Memory faithfully pictures to me,
How we played on the grass 'neath the maples,
In the noonings, or down the green lane
Went in search of such berries delicious
As we never shall gather again!

How we doubted the wisdom of teachers,
Nor grew quite as wise as we might,
Our eyes from the page playing truant,
To the clover-field blossoming bright.
When four o'clock came—Oh, how welcome!—
Farewell then to lesson and book,
How often we lingered home-going
To lave our brown feet in the brook!

Oh, how well-remembered the school-room,
The desks and the benches so high!
The windows, all guiltless of shutters,
Ah well! but those days have gone by.
Yes, e'en the red schoolhouse has vanished;
At the new one 'neath sheltering trees
There is teaching, with "modern improvements."
Were the former times better than these?

And my schoolmates, like autumn leaves scattered,
And some of them—lying as low,
Beneath costly tribute of marble;
Over some, the forget-me-nots grow.
And the living—the lab'ring, the loving,
The hands and the hearts that are full—
We are learning full many a lesson—
We are scholars still going to school.

And when the long school day is finished,
"Life's sun sinking low in the west,"
Glad children, with hope undiminished,
May we seek our home joys and home rest.
If we linger awhile by the wayside,
We'll still keep sweet home in fair sight
At the gate, with "we'll meet in the morning,"
Sweetly bid our companions "Good night."

Educational Notes.

BY CLEON.

In the great work of educating the youth of this nation, there is no teaching so badly needed as the teaching of the teachers themselves. Not that the teachers as a class are not a very intelligent portion of community; not that they would not compare favorably with any other class, whether considered morally, socially, or intellectually; but that as a rule, they do not reach the standard their vocation demands and implies—that they as a class, need more intellectual capacity, and greater moral and social excellence.

In order to understand the capabilities of the teacher—to understand what he should himself be, it is necessary to know what he has to do. The question may be easily and flippantly answered—satisfactorily too, to those who do not care to look into the depths of the argument—that the business of the teacher is to educate—to educate the rising generation. But those who would go below the surface might ask what *is* education? what is it to educate the youth? And having answered these questions, they should next ask whether the teachers as a rule are equal to the task.

Education is development. And a proper education is the harmonious development of faculties. The farmer who plants and tills his fields, educates so to speak, his growing crops. The stalk of indian corn has been educated through the ages, from a plant much inferior to that whose harvests now load our

fields and fill our granaries. The wheat plant has been educated from the plant growing wild in France, known as Aegylops, and much inferior to the plant now cultivated as a food plant and known to botanists as *Triticum vulgare*. The crab-apple has been educated into a thousand varieties of delicious fruits greatly superior in size and flavor to their crabbed ancestors; and within the memory of the youngest of us, the strawberry has increased greatly in size, putting on the proportions of the Russel, the Wilson's Albany, and the Triumph de Gande.

The horse is educated, when his power, symmetry, and speed and whatever other qualities he may possess, are brought out. The many varieties of this noble animal, from the shetland pony not larger than a Newfoundland dog, to the English dray horse, almost elephantine in proportions, demonstrate the capabilities of the animal organism for impovement.

The great varieties of the human race itself, allowing the received opinion to be true, that all mankind have had common ancestors, seem to show that man too is subject to the general law, and is capable of progress as a race. It is not altogether because the men and women of this age have grown up under the civilizing—the educating influences of the nineteenth century, that they are intellectually and morally superior to their savage ancestors who feasted on the blood and fat of their slain enemies. But it is because they are constitutionally superior intellectually and morally, an effect due to the civilizing and humanizing influences of the ages. Man is not only progressive as a unit, but the race is capable of development, and for this reason he stands to-day, both in his moral and intellectual nature, and in his general civilization, superior to his condition in any former period.

San Jose, Sept., 16th.

Economy of Live Stock.

The man who allows nothing to go off his farm in a bulky condition, will surely lay up an inheritance for his children if he does not handle as many dollars in his own lifetime. The best policy for a farmer who has a good hay ranch is to own cattle or sheep or hogs enough to eat on his place all he produces, and though he may not for a few years perceive any increase in production, but a little time can elapse before this plan can vindicate itself. If he has not at present the means to stock his place, the next best thing is to get stock on shares or to pasture by the month, or in default of being able to do either of these things on satisfactory terms, then, instead, he should try and sell his hay to be fed out on the place. We know of some farmers not far from the city who are following this plan very successfully. They have large portions of their farms seeded in alfalfa, and cut annually from four to six tons of hay to the acre. They put this hay into barns or well built stacks, and sell it to men who follow the lumber business in the mountains, to be fed on the ground. Men engaged in the lumber business in the mountains work cattle during the spring, summer and autumn, and turn them out to recruit during the winter. They come down into the valleys and buy hay and drive their cattle down and feed them with it. A large number of tons of alfalfa have already been sold this season on the Sacramento river in this way at $7 a ton in the stack. Aside from the gain to the farmer this is much better than to bale and haul it to town and sell it at the usual rates, say from ten to thirteen dollars a ton.—*Record Union.*

An exchange thinks the pews of some of the churches ought to rest on pivots, so that the occupants could see who comes in without straining their necks.

Stock Breeder.

The Charm of New or Foreign Breeds.

The tendency of American stock-breeders and dealers, says the *New England Farmer*, seems to be to obtain something that is new, or that is supposed to be new—something different from what is already generally known by the farmers at large. It does not satisfy their ambition to take a breed of animals and by careful breeding keep them up to a high standard, or even to improve them by judicious crosses, and by intelligent systems of breeding. There is too much work about this. They want to reach the desired end by some short cut. Of course we mean those breeders and dealers who class themselves as "fancy" farmers, and who expect to make their fortunes by selling stock at fancy prices. It is a little amusing to watch the progress of events in this business of breeding and selling fancy animals. At one time a chicken with a peculiar arrangement of the comb will shake the country from the Atlantic to the Pacific, and after after a few years no chicken of this peculiar breed will be allowed in a show coop unless it comes up to the standard as regards this little matter of a comb. The knowing ones, seeing no chance to make money much longer in this direction, start a new feather of a certain shape or color on some one of the trio, and immediately a great sensation follows and lots of money is made by those who, having been warned in season, are prepared for the rush. One of the latest sensations in the poultry line is a pea-comb on a trio of Partridge Cochins, and doubtless there are already hundreds of anxious breeders ready to pay a big price for the few eggs that the owner can be prevailed upon to spare of this very desirable acquisition, next Spring. If the new breed can boast of *foreign* origin, all the better. The word "imported" has a peculiar charm for the ear of the average American, whether it refers to a breed of cattle, sheep or poultry, or to the cloth of a coat or the shape of a hat.

The following letter from Mr. F. D. Curtis, of Charlton, N. Y., to the *Rural New Yorker*, contains views which accord with our own sentiments quite fully on this point. He says:

I notice in the *American Agriculturist*, Mr. Joseph Harris, in his "Walks and Talks," has at last come around to my way of thinking in regard to breeding English sheep in this country. He says, "It is not an easy matter to keep our sheep up to the English standard." I say it is impossible, and have argued that not only the climate was against us, to which Mr. Harris alludes, but that the English system of feeding produces an excessive growth, consequently a weakened constitution, ill adapted to our rigorous and changeable climate; and being thus pampered, I insist that there is a constitutional propensity inherent, requiring more stimulating food than American farmers usually feed; and moreover, if we follow the English formula to the letter the sheep will deteriorate. Mr. Harris brought out an important fact in this connection which substantiates my position and sheds light on the English system of breeding, and at the same time shows the absurdity of the *glamour* of "imported" when he remarks:

"We often hear of 'improved' Cotswolds or 'improved' Leicesters, or 'improved' Berkshires, which I suppose simply means that they have been crossed with some other breed. Bring this 'improved' stock here and keep it here, and it will inevitably degenerate. It is easier to make an improvement than to keep it." The measure of honor among American breeders will not admit of these crosses to keep up the standard with the various thoroughbred breeds, as custom has established a law requiring a direct descent from imported stock. After we cross the water no questions are asked and no guarantees are required from sheep or pig breeders. It is evident from these facts that the English breeder has a great advantage, owing to the gullibility of Americans and their fashionable weakness for imported stock. The English breeder can doctor, pamper and cross his pigs and sheep without limit, and call them whatever names he choose, and his enterprise is accepted by the Americans as standard authority. How long shall this nonsense continue? Is it not time that we began to establish American breeds?

Breeding.

There is too much truth in the charge that many farmers and breeders of stock are content with merely knowing that a stallion is a horse, a boar is a hog and a ram is a sheep. They know nothing and care as little about the "points" and "blood" in stock, and not unfrequently will charge that all the talk about those principles is mere moonshine, and they can do just as well without paying any attention thereto; that they know a good animal when they see it as well as your best judges, and they would not thank any one to judge an animal for them. Too many of this class of men, when they wish to increase their herd, resort to a scrub male in preference to a thoroughbred because of the difference in the price of service. Especially is this true as to the stallion from which they breed; and as for buying or breeding to an animal of unquestioned purity of blood, that never entered into their heads. We are glad to believe, however, that this class is gradually growing less each year, under the influence of social reformatory processes and more light pouring in among the great mass of farmers and breeders; and no effort should be spared to reduce the number to almost none. Let a few stand as mile posts and warnings to others, to show the errors of such a course.

Upon this important point the *Prairie Farmer* has some good suggestions appended, saying: "Breeding continues, as it ever must, to occupy the attention of those interested in stock. Skill, science and sound judgment invariably, when combined in the breeding of animals, meet their due reward. Money can not purchase success, as the price willingly paid for successful breeding is sufficient to stimulate all to their utmost to attain prosperity.

That any one can lay down "laws" for breeding that must result in success in all cases, is ridiculous. That any man can, from the breed of any animal, positively assert that he is to be superior to all others of same age and class is equally preposterous. There is no doubt about one thing—that known purely high-bred, tried families, with fine make, shape and action, train on and cut up much better than any man's judgment could detect, without a knowledge of the breed of such families.

Some men of great practical experience will tell you all horses that are thoroughbred have an equal chance. This is a great fallacy. Stout hearts, good dispositions and constitutions are absolutely necessary training to test their stamina.

The very finest and best bred horses in the world, without true formation, action, soundness and stamina, cannot compete successfully with those possessing these qualifications.

Then it seems rational that breeders of horses should not blunder on in the dark. They should study to breed from highly proved stallions with true formation and symmetry, without which the *action* cannot be *true* and *lasting;* and inasmuch as the stallion, in nine cases out of ten, moulds the locomotive power of the produce, both as to size and true formation, how requisite it is that the original should be perfect in this respect, as well as stout, good and highly-descended, with all other good qualifications. Many of

our best horses, possessed of brilliant speed, courage and stamina are not adapted to hand these qualities, with any degree of certainty, down to their offspring, unless very carefully examined before they are made *beastly fat*, and their weak points counteracted by being crossed with certain strains of blood known not to possess their idiosyncrasies—*i. e.*, peculiarities of temper, disposition, formation, soundness, etc.—*Rural Sun.*

Household Reading.

The Cottage.

BY JEFFREY OIFFORD.

WHERE the cosy cottage stands,
By the silver streamlet bright,
Graceful hills and meadow lands
Mark a region of delight.
On the warm slopes light does stray,
Rosy-footed all the day.

Rural paths lead here and there,
Fringed with leafy colonnades,
While children, free from strife or care,
Frolic on the velvet glades.
Farther down the village spire
Is all ablaze with crimson fire.

Still further on, the stream winds round
At the foot of yonder wood,
And the bordering edge of ground
Serenely glows for many a rood.
Where the placid brook flows deep,
Rich pastures feed large flocks of sheep.

Milk-white lambs here sport and play,
Till in gambols weary grown,
As slowly fades the waning day
And the fields look drear and lone;
Yet the glens are flecked with foam,
Where the dancing waters roam.

Forever, day and night the same,
The babbling spring is bright and clear,
And prattling child and aged dame
Here watch its ripples year by year.
Near by, great oaks in stately pride,
Stand close together, side by side.

—[Pen and Plow.

Chats With Farmers' Wives and Daughters---No. 10.

BY "JEWELL."

Girls, don't be in a hurry to marry; don't marry for a home, or from fear of being an *old maid*. While true marriage is the perfect condition of both sexes, an unsuitable match is sure to be unhappy, and is to be regretted by all. Few girls before twenty fully know their own minds or hearts; and as marriage should be controlled by both, it is very essential that we use our minds *first* and our hearts afterwards. In choosing our friends, let us be sure they are men of principle rather than of money. And while we cannot intend to marry *all* our acquaintances, still, if we show a preference for men of good habits, good health and sound principles, we silently place a premium on such qualities: and if all girls did the same, few men would cultivate such filthy, expensive and unhealthy habits as drinking, chewing and smoking.

Talk about woman's influence! Of what use is it if she does not exert it to elevate the opposite sex? Of what benefit to her or her friend to be thought pretty, lady-like and well-dressed? And yet these are the charms most girls seem to desire, without a thought of the good she may do in educating, or keeping alive and active, the *good* which is in all; and by trying to benefit others we are always elevated.

Then, who more time and ability in beautifying our homes than our daughters? They are full of youth and beauty, and ready to catch the spirit of beauty wherever seen, and in a thousand ways adorn corners and walls in fancy and useful articles, which we of family cares and anxieties do not get the time to do, though the love is in our hearts all the same.

I thought to myself the other day, while making a call on a farmer's daughter, that a country life was more prolific of beauty in every way than a city life. Now, girls, take note, and see if you can produce as much beauty out of little as I saw. Outside on the porches were rows of plants of great variety and beauty, many of them rare and expensive to buy, but raised from slips were inexpensive and doubly dear. Stepping inside the dining-room, everything was charmingly simple and yet full of use and beauty combined. A substantial paper-holder I especially admired, made of stiff paste-board, covered with fancy dotted paper, with a scroll running around the entire edge which the daughter said she cut from wall-bordering, and two boquets pasted on the front quite finished its beauty. A long cord suspended it from a nail, and two screws held it firmly in place. Under it stood the sewing-machine, and a linen cover bound with crimson braid, gave it a tidy look. In the parlor, cool and neat in white matting, stood an open piano, with pretty things upon it. Before one window was a tiny stand with a gold-fish globe filled with trailing water-plants—the variety most charming to behold. In another window was a square squarium, filled with shells, stones, fish and growing water-plants. Suspended from both ceilings were phantom fly-catchers. The spare room was a marvel of whiteness, and the pretty comb-holder beside the glass was of paste-board, bronzed with this shoe-bronzing, and tiny boquets pasted on. Such did this farmer's girl make her surrounding, while she herself, full of health and life, was the joy of her delicate mother, a large circle of friends and the soul of the house. Such a daughter cannot fail to make a wise choice in marrying and be a good wife, no matter what her station in life may be. Why? Because, in the first place, she is making the most of herself now by cultivating the æsthetic nature, as well as the practical. Secondly, she is not devoting her entire time and attention to the adornment of her form and face, as so many girls do. And thirdly, she is healthy and robust from simple habits and early hours, fresh air and sunshine, instead of giving her freshness and roses to the theatre and parties, where most of our young people spend too much time and money. Having time for reading and choosing the best, she is capable of mature thought on all subjects, and such I found her to have in conversation. I feel sure there are many such in our country homes, if we only could find them.

GRANDFATHER'S LETTERS---NO. 1.

Something About Married Life.

Dear Jewell:—I cannot but feel thankful that one has stepped forward to apologize for, and in a measure excuse, that boorishness in husbands of which "Esmeralda" has but too much cause for just complaint. On reading "Esmeralda's" letter it brought to mind my earlier days, and with it self-conviction and a wish that I could do something, say something, to make things better in this particular, and your expression, "hoping to hear from the other sex on this subject," encourages me not only to think but to say. Not but that I may expect the editor will cast this into the waste-paper box, from having something so much better thought and said on the subject. However, knowing that my sex is not so prolific on this subject as yours, I will venture to send this. If you have a variety to choose from, all the better.

I recognize an abunpance of truth, both in "Esmeralda's" letter and in your reply; and following your example, "as a text to my chats" on this subject I take the single word,

"SELFISHNESS."

The present usages of society are such, that our sex are the first promoters, in its incipient stages, of the conjugal relations, and it is too much for E. to say, "she has chosen this one man from all the world." With her it is but too often "Hobson's choice"—this or none. No, the choice falls on our sex; hence the responsibility, and doubly so the imperative need and right of the subjugation of self in favor of the wife of *his* choice. And I appeal to the conscience of every one of my fellow-benedicts, and ask if they were as much or more concerned for the happiness of the one to be chosen, before she was chosen, as for their own happiness? Should she not have the approbation of his head and his heart, the one he had in view, of whom he contemplated making choice? Was self rather a secondary consideration, the primary one that of the happiness of the one he is about to draw to himself away from former friends and associates, away, oftentimes, from elegancies, or at least great comforts, to a rougher mode of life? Where there is mutual love and heroism enough to start on this foundation in the varying shades of life, the right beginning is made. Now, to keep it up and go on from good to better is the *desideratum*, the thing to be really desired, as well as to avoid that degeneracy from bad to worse, as we see is too often the case. For this, also, each party has ample responsibility, but most devolves on our sex as the stronger party—the formation party. And let us see that we don't repeat the old garden story, and shirk the blame on *her*, whom in this instance we have chosen.

To do this we must habitually feel our great responsibility—habitually feel how we should demean ourselves by a hasty, ill-tempered word or unkind look—habitually feel the importance of keeping up that sanctity of manners, that polite, courteous demeanor so agreeable to all. Are we to suppose it to be less so to her, with whom we have chosen, above all others, to be in daily contact. To some, all this kindness appears to flow forth spontaneously, while to others it requires a good deal of careful and continuous cultivation. I take it we shall be the better for a little timely thought on the subject.

There, dear "Jewell" and "Esmeralda," before giving more on your subject in view of making it a success, I submit this for your criticism. Throw it aside, or say you will have more from GRANDFATHER.

A Contrast.

EDS. AGRICULTURIST AND LIVE STOCK JOURNAL:—I picked up my scrap-book yesterday and saw this piece which I thought worthy of reproduction:

"I was out walking the other day, when I noticed, among other things, one of those pitiful sights that I am sorry to say are so common in this State—a poor, lone bachelor's cabin. Poor, did I say? He may be rich. Yesterday, perhaps, he picked up a ten-pound nugget. His pocket may be lined with gold. That fifty-vara lot his shanty stands on may be worth a fortune, as fortunes go in this world. Yet see him alone, sweeping his floor, watching his bacon over that fire in the corner, rough and shaggy are his clothes, and a desolate, homeless look haunts his cabin like a genius of evil, the wind moans through his

cracks, the windows are greasy and broken and the spiders weave their dirty webs there—he is poor if that is his wealth.

Further on is a nice little cottage, half-hidden by the fast-growing trees, surrounded by pyramids of bright-tinted flowers that offer their sweetness a free gift to the wind; how grateful their perfume, like incense ascending from the altar of home. As I stood by, admiring, a bright little girl came up and inquired, "should she pick me some flowers?" "One or two, if you please;" and the white-armed little angel flew around through the beds, picking whole handfuls of roses and jessamines and the sweet-scented balm, and with an innocent smile came and offered them over the gate.

I have no comments to make. The two pictures speak for themselves—only this: California's *hopes* are her *homes*. Like her drifting sands the lone ones float away, but her granite hills are not more firm than hearth-stones where the Lares and the Penates are placed. California honors are the bulwarks of the State." IDA.

A Successful Remedy for Vermin on Fowls.

EDITORS AGRICULTURIST:—After reading the close of "Snip's" "Familar Talks," I am inclined to give you a little of my experience with vermin in chicken-houses. I began to keep chickens with the belief that cleanliness was all that was required, and to that end I kept a pot of whitewash always ready, and my nests were coated thick with it, but the pests increased and multiplied. This year I had the nests all taken away, leaving a broad shelf running around the house. On that I put new nests made of five-gallon kerosene cans with the side cut out and pounded smoothly down so as not to be sharp. These can be often cleaned, but my remedy for the vermin is carbolic acid. I tried sulphur, but did not think it was of any use, though I think it is well to feed occasionally during Summer. I use the carbolic acid as it comes for sheep-wash, merely diluting with water. I sprinkle the chicken-house and nests, and once in a while have the roosts brushed over with it, and so far this year I have not been troubled with vermin at all. Perhaps if "Snip" will try this remedy she will be better satisfied, so you can publish this letter if you choose. Respectfully,

MRS. JOSIE P. HILL.

INJURIOUS MANAGEMENT OF DISHES.—A good set of dishes will last for ages, if properly handled. We have heard of an excellent housekeeper whose bridal dishes, thirty years old, are in excellent condition to-day, although they have been in use every week, more or less, during all the time alluded to. In a common dinner service it is a great evil to make the plates too hot, as it invariably cracks the glaze on the surface, if not the plate itself. We all know the result. It comes apart. Nobody broke it. "It was cracked before" or "cracked a long time ago." The fact is, that when the glaze is injured, every time the "things" are washed the water gets to the interior, swells the porous clay, and makes the whole fabric rotten. In this condition they will also absorb grease and when exposed to further heat the grease makes the dishes brown and discolored. If an old, ill-naed dish be made very hot indeed, a teaspoonful of fat will be seen to exude from the minute fissures upon its surface.

THAT nation that loses her liberty is not aware of her misfortune at the time, any more than the patient is who receives a paralytic stroke. He who first tells either of them what has happened is repulsed as a simpleton or a churl.

Domestic.

Domestic Comfort.

BESIDE the fire sat Farmer John,
One blustering winter night;
Beside the farmer sat his wife,
Whose knitting needles bright,
Flew in and out through the woolen socks
Of clouded blue and white.

"'Tis a tedious night!" quoth Farmer John;
"I'm glad I fixed that shed,
It's such a nice place for the sheep—
It shelters every head;
There's not a critter out in the storm,
And everything is fed."

"It is a comfort," said his wife;
"And I am thankful, too,
That I have got those mittens done
For both the boys and you,
And that the girls have good, warm clothes,
From hood to overshoe.

"I wonder what I should have done,
If you had proved to be
A drunken sot, like Jimmy Stone,
Who married Susie Lee;
You know she was the prettiest girl
In all the town of G—.

"Her children sleep to-night in beds
With covering scant and thin,
And through the shingles old and worn
The snow comes sifting in,
While ours are tucked up snug and warm,
From toe to rosy chin."

"You needn't lay it all to me,"
Said John, with loving pride,
"If you had been a shiftless jade,
Like Mary Ann McBride,
Who spends the half her time abroad—
And the other half beside—

"I do not dare to think how sad
Our fate might be to-night;
The children hungry, and half-clad,
Myself a ragged fright,
And everything about the house
In a disordered plight."

And in his heart he blessed the wife
Who had filled his life with cheer—
And she thanked God for the husband true
Who made her home so dear;
And both were glad for the little ones,
In warm beds sleeping near.

A Few Little Things.

My entire household, including the hired girl, is full of satisfaction to-night over the fact that I have just driven the ax-handle firmly into the ax and wedged it there, so that it cannot under any circumstance come out. It may read like a small matter to you, but do you know that that helve had been loose for nearly five years? Yes, for five years that ax has flung itself across the yard whenever I struck a heavy blow, leaving the helve in my hand, and I suppose I have decided more than thousand times to go in and get a hammer and chisel and fasten the helve in. I was thrown and had my arm broken by the ax flying off, two hired girls had their noses broken, we spoiled the stove-boilers, nearly killed three boys, and yet I didn't get around to fix the ax until to-day.

Foster was telling me the other day that he had finally glued that knob on to the bureau drawer, and he seemed greatly relieved. I remember when that knob was knocked off—almost seven years ago. I was helping him move the bureau when the accident occurred, and I never was in the house afterward without hearing Mrs. Foster say:

"Come, Henry, haven't you got time to fix that knob on this evening?"

"Yes, Martha," he would reply, and yet it was seven years before he got at it.

Seven or eight years ago, my neighbor, Mr. Goodwin, found a cow among his cabbages one day, and in driving her out she jumped over the gate and broke one of the hinges. He went in and got a hammer, screw-driver and screws to repair damages, but his wife called him into breaktast just then. After breakfast he hadn't time, and so it ran along until the other day. He passed through the gate an average of five times per day for about seven yeaes, or thirteen thousand times in all, and he had lifted it up, carried it around and bothered for half a minute each time. Thirteen thousand times he said to himself that he would fix that confounded gate, and yet he didn't do it until the other day.

Some twelve or thirteen years ago I was taking dinner with Turner, over on Adams avenue, and his wife called attention to the fact that she had that day broken the handle of her big seven pound flat-iron, and that she must get another. The other day I met her on the street, and she told me she had replaced the flat-iron at last. For thirteen years, fifty-two times per year, she had used that broken handled iron to smooth down her washing, and every time she had said to herself that she would go up town next day and order a new one.

Bristow died last week. We were warm friends, and I was with him to the last. After he had called the family up one by one, and shaken hands and said good-bye, I saw that there was yet something on his mind. I admonished him to trust me if he had a dying request, and he grasped my hand and replied:

"I've been trying to find time for the last seventeen years to take the butcher knife down to the shop and have it ground, and if it wouldn't be asking to much of you, I wish you'd see to it!"

I promised him, but it may be twenty years before I get the knife to the shop, and ten years before I call for it.

I can remember when old Mrs. Bagley died. She had a china teapot in her house which had belonged to her grandmother, but she had always kept it in the drawer because the handle was broken and wanted cementing. She gave the teapot to a neighbor, who waited five years for a bottle of cement, then four years more to find time, and finally knocked the spout off while trying to mend the handle.

I don't suppose any of us would forget the day a note was due, but if the knob should drop off a chamber door, I expect that George Francis Train might be elected President before we would find time to replace it.—*Ex.*

MISMANAGED WORK IN THE KITCHEN.—I think there is more in knowing how to manage than there is in anything else about housekeeping. How many, many housekeepers just spend half their time in mismanaged work, never accomplishing one-half what they might do if they would just do a little thinking and contriving along with their work. Then they wouldn't have to spend so much of their time in fuming and sweating, and in envying others, who they think are more favored than themselves. Now I think I shall tell you right here of one of this kind of workers that I had a chance of observing one morning last November. I entered the kitchen at 8 o'clock, and there were the unwashed breakfast dishes sitting upon the table, and Nora was bending over the stove trying to rekindle the fire that had almost gone out; she succeeded in getting it to burn, and then put her dish water on to heat, sitting down until it got warm enough; washed the dishes, very slovenly about it, or at least it wouldn't have satisfied me to see our dishes put away in that manner. Well, by the time the dishes were all put by, the fire had died out; so, after the sweeping was done the fire was rekindled, and the irons put on in a cold heater, the clothes brought from the room, all unfolded, and piled upon two chairs: the ironing quilt spread upon the wet table where the dishes had just been washed, and then Nora sat down to rest until the irons were hot. Now, if I or any of our family had been doing that morning's work, the clothes would have all been nicely folded away ready for ironing the evening before. Then our water would have been ready for washing the dishes as soon as breakfast was eaten, for we always keep a pot of good, soft water on the back of the stove on purpose for dishwashing, &c., and the fire would not have been allowed to die out, but while we were eating, the iron

heater would have been on the stove getting hot; then, while the dishes were being washed the irons would be heating, and as soon as the sweeping and dusting were through with the ironing would have been completed in one-third the time that Nora's was. I don't see why more women don't think of these things, and try managing right.—*Carrie Lee in Cin. Times.*

Recipes from "Jewell."

CREAM CRISPS.—Take a pint of graham flour and mix with two table spoonsfull sour cream and water enough to make a dough, roll and cut in diamonds, crossing with a knife on top, bake and eat warm or cold—delicious.

HOW TO GET THE SEEDS OUT OF GRAPES WHEN CANNING.—Put your grapes, after washing and pulling from the stems, in a milk pan with a little water, cover, and let them scald when they will burst; then take them off and seating yourself, take a large spoon and stir gentiy and shake up from the bottom, when the seeds will drop out and you can dip with the spoon from the top into another pan, return to the fire and when boiling can.

LADIES FINGERS,—One-half pound of powdered sugar, one-fourth pound of flour, four eggs, whites and yolks beaten separatcly and very stiff. Drop upon buttered writing paper in long narrow cakes, and not too close—bake to a light brown. Try one and if it runs, beat a while longer and add more flour.

KISSES.—Beat the whites of four eggs, add four cups of powdered sugar slowly, season with lemon, dip writing paper in very cold water and drop the mixture on not too close; try one and if not stiff enough, beat a little longer and add more sugar; bake to a light brown.

I will add also the following, selected from my months reading of other journals:

TO COOK MUTTON.—Every week or two we kill a mutton. I roast it all. I put it in the oven in a large bakepan, put it in water, cook till eleven; turn it over twice; everyone who eats a mutton here says it is the best they ever ate. At eleven o'clock take out the mutton, fill the pan full of potatoes and bake them, thicken the gravy, and you need little else for a dinner fit for a—well, anybody. Kings are no better than we are.

TO PRESERVE LEMONS FRESH.—Slice them as thin as possible, and put into a nice sweet jar wfth alternate layers of sugar and lemon; remove all the seeds, have each layer entirely covered with sugar; tie a thick cloth over the jar before putting the cover on, so as to exclude all the air. I have kept them perfectly fresh for a year in this way.

TO BAKE HAM.—Most people boil ham. It is much better baked, if baked right. Soak for an hour in clean water and wipe dry. Next spread it all over with thin butter and then put it in a deep dish with sticks under it to keep it out of the gravy. When it is fully done take off the skin and matters crusted on the flesh side and set away to cool.

FOR SKIRTS, ETC.—Place two ounces of fine white gum arabic powder in a pitcher and pour on it a pint of water; then cover and let it stand all night. In the morning pour it carefully from the dregs into a clean bottle and cork it and keep for use. A teaspoonful of gum water stirred in a pint of starch made in the usual manner, will give to lawns, either white or printed, a look of newness when nothing else can restore them after they are washed.

Boys and Girls.

Four and Twenty Different Birds Baked In a Pie.

[The names of twenty-four birds are found in the following lines:]

An old woman went to the mart in haste
In a scarlet cape, a cocked hat laced,
In her hand a crook; and she said, "Well, I say,
How lucky it is this is market day!"

She had over two miles from her home to speed,
And with awkward steps she went fast, indeed.
"My sons want a pie as large as can be,
And a brave, noble pie they shall have," quoth she.

She, in a panic, ran ever so quickly,
Where the ground with rushes was covered thickly;
So quick, I tell you, she ran that she
Fell in nettles quite up to the knee.

Just where one can a rye-field espy
And through the oak-tree a gleam of blue sky,
There fell the dame—"Bitter nuts, I must say!
Who thought of laming one's self in this way?"

Her heart did throb in dismay and fear,
A fall doth befall conceit, that is clear.
This comes of being roused, for vanity's sake,
To regular kingly party to make.

At length up she scrambled. How rent was her gown!
"Too late, all too late I shall be in the town?
To go, O severely my legs it will try,
Yet a parsnip, eggs, bacon and birds I must buy!"

However, she managed to hobble away,
And for twenty-four birds her money did pay;
In a wonderful pie then the birds she did cook.
You will find all their names in these lines, if you look.

—[Youth's Companion.

Letters From the Young Folks.

Dear Uncle Ben:—Maybe I'm not too old to write to you, though I had much rather the space allotted to the "Boys and Girls" be filled with letters from their own hands. By making your request known among the young folks, two letters have come to hand to be forwarded to you with the promise of more. Think of a boy of twelve receiving twenty dollars a month for five months steady employment, to enable him to assist his widowed mother and her younger children! I promised to see that he received a copy of the paper containing his letter to encourage him in writing again, knowing that improvement to the young folks is your chief aim in inviting their correspondence. Hoping the children in your vicinity are anxious to follow the example so nobly set for them, and that they will continue to swell the column devoted to them to its utmost limits, I am ever your friend and well-wisher, W.

SANTA CRUZ, Sept., 1875.

Dear Uncle Ben:—I am glad that you want all the little children to write to you. I am a little boy twelve years old. I have been working for this Flume camp for five months. There are some very high trestle-works here. The highest place is ninety feet; and there are some very deep cuts in the ground.

I help the cook. I have to cut all the wood that he burns. I and my brother work to get money to support my mother and my other younger brothers stay at home. This is all I can say this time. GEORGE A. NOTLEY.

Dear Uncle Ben:—Mamma says you like to have little girls and boys write to you, so I thought I would tell you about camping out. Sometimes I go paddling in the flume. Sometimes, when other little girls and boys come to see me, we all go paddling in the San Lorenzo creek. My papa works on the Flume. One day we all had a long ride in it; it was nice fun. I like to camp out because I don't have so many dishes to wash. I am nine years old, but I can't write very good because I never went to school only three months. I say my lessons to my mamma now. There is one little girl and three little boys that come to our camp, and mamma hears their lessons, too. My auntie's horse stepped on my foot. At first I thought I was most dead, but it's got most well again. Cant stop to write any more this time. Good-bye. From

MAY E. PERKINS.

FLUME CAMP, near Felton.

Dear Uncle Ben:—I don't know how to write for a paper. I am a country boy now, used to live in town. I like the country now better than when I first left the town. I do not see so many people now, but have got used to it, and think it real nice to learn all about horses, and cows, and pigs and things. I have given a name to every one of them, and they seem to know their names. To me they are all like so many people. They all have different dispositions, too, and are just as much like folks as anybody.

I want to tell you about old Dingy and her calf Spriggy. Spriggy and I have lots of fun running around the corral. Old mother Dingy is between a red and yellow sort of faded out color, but she is a kind old cow and gives rich milk. We never let her calf suck at all, but make it drink. It learned by sucking our fingers in a pail of milk. I milk old Dingy, and she thinks I am her calf. She will moo after me and lick my coat-sleeve when I go to her to milk her. The little bossy, Spriggy, thinks I am his mother! I always feed him now.

I have budded some rose-bushes and they are alive. Next Spring I am going to learn how to graft our orchard. I could tell you lots more about a heap of things. I will be thirteen next month. I go to school seven months in the year, and ride a horse to school. Goodbye. HARRY.

My Dear Uncle Ben:—I thought I would write to let you know how we are getting along. We are all well except my youngest brother, who has the toothache. We had a great time the other night getting a coon out of a tree, but not until he had killed three chickens. My father got the gun and called us up; we held the light and he shot it through the head. This makes three he has killed in the dooryard. The dogs like the fun, after the coons are half dead, to shake them. We have a fine lot of water-melons. They go very good, as we have no other fruit. We received those copy-books the day our school closed. Many thanks from us all. I had thirteen head-marks; the rest had six. We are all going up on the side of a mountain to get a load of fossil shells for our chickens. I wish you were here to go with us. I know you would kill a deer, besides lots of other game. My father is almost ready to start, so I must close. Goodbye for this time. LYMAN ROSS.

LOMPOC, Sept. 6th.

Little Folks' Dictionary.

A writer in the *Schooldday Magazine* has gathered together the following dictionary words, as defined by certain small people here and there:

Back-biter—a flea.
Bed-time—Shut-eye time.
Dust—Mud with the juice all squeezed out.
Fan—A thing to brush the warm off with.
Fins—A fish's wings.
Ice—Water that stayed out in the cold and went to sleep.
Monkey—A very little boy with a tail.
Nest-egg—The egg that the old hen measures by to make new ones,
Pig—A hog's little boy.
Salt—What makes your potatoes taste bad when you don't put it on.
Snoring—Letting off sleep.
Snow—Rain all popped out white.
Stars—The moon's eggs.
Trunk (of an elephant)—His front tail.
Wakefulness—Eyes all the time coming unbuttoned.
A small catechism—Kittenchism.

Hygienic.

Two Ways of Dressing Our Babies.

BY "JEWELL."

Will not here let me describe the clothes given me to put on a new born baby not long ago.

In the first place, the flannel band was hemmed each side and at each end; it had been used before, and having shrunken was thick and stiff. Then a linty thin, fine linen shirt, no sleeves but lace, the same style our grandmothers used ages ago—long enough to go twice about the body—but intended to be folded before and behind. Then a flannel pinning blanket with broad band double, of new cotton cloth, long enough to reach once and a half about the child. Then a flannel skirt with same sort of band, a white skirt, band ditto, and to slip over that a calico double gown, and then a blanket to wrap about the childs head! Now friends, this is no fancy picture as you know. I have dressed scores of infants in the same way, with more or less to put on. Once all they gave me was a blanket, very short, a fine linen shirt, a pinning blanket that did not reach around the body of the child, he being larger than the previous one, and a white nightgown; nothing over the arms or neck but one thickness of cotton cloth, while the body had six thicknesses, and one of them flannel.

In the first case, there were 13 thicknesses of clothing about the abdomen and three over the arms and neck! No wonder our babies cry and worry, making them the laughing stock of the world—and their parents nervous and weary with unnecessary care. By dressing the extremities too thin and the bowels too warm you induce the blood to flow and remain where it is the warmest, acting as a prevalent cause of inflamation of the bowels, a disease quite frequent among infants in consequence of bad clothing to a great degree—what else more likely to give a nursing infant cholera infantum? unless indeed it be the mother taking very improper food and drink while nursing the baby.

And now I will tell you how to make clothes that will dress baby comfortably, and be convenient to put on or off:

First the band (only to be worn the first two months and put on loosely) should *not* be hemmed, and should be made of new flannel. Then a long sleeved, high necked knit shirt, of fine saxon wool—any mother could knit one in less time than she could make one of those gossamer linen shirts—and baby is warm and soft as in down; then a high necked, long sleeved flannel waist buttoned behind or before, and on that a pinning blanket is buttoned or a white petticoat or flannel one if you wish; over all is a flannel slip or night gown.

If it is winter and you have to take baby through draughts, an excellent plan is to have a long sacque of plaid flannel with hood attached, with elastic about face of hood which can be slipped on or off as you need it. The sacque buttoning down the front keeps baby perfectly wrapped, and is very convenient if an older child or husband were to tend baby while you are busy, as they are sure to get all the blankets and fixings on a baby about its head in an honest endeavor to keep it warm.

This latter style of dressing baby gives four thicknesses over the body and three about the arms and neck, which is in right proportion. The arguments in favor of its general use are many and good. First, it is easier made; second, less expensive; third, more easily put on the child; and fourth, is more comfortable and healthful—not one of which will apply to the old style.

Dr. Warren, of Boston, once said that "that city sacrificed 900 babies every year by not clothing their arms. Most of the babies brought to me at the dispensary were improperly clothed. The arms are usually exposed—the legs often, and a thick bandage is frequently tightly drawn around the abdomen. These errors in clothing are almost as bad in their effects as errors in diet—especially in a climate so changeable as the American. The dress should never form a ligature about any portion of the body, since it interrupts circulation and promotes congestion," etc. Dr. Garrish says he always recommends mothers to put soft flannel shirts on their children, summer and winter as a protection against changes of temperature.

Flannel is the best article to put on infants, for if it gets wet it is still warm and comfortable. Don't be afraid of keeping your babies too warm. They thrive best when warm and quiet; but give them plenty of fresh air. They sleep twice as long out of doors under a tree as in a close room in the cradle. Try it.

Mothers, Save Your Children!

BY NELL VAN.

Let any person, who is at all familiar with the laws of health, look around on the girls of America and observe how many of them reach the age of twenty in the full enjoyment of earths richest blessing.

We find among them beauty of complexion, fine eyes and hair; white teeth and slender forms, but robust health is a rarity. Why is it? Can any one account for the fact that the young California Indian girls (Greasers as they are called) who are taken from their semi-barbaric life and transplanted into the household of civilization, in a few years droop and die? Mark the difference between the children of one family in health and activity. The boys live out doors after they step into the pantaloon age. They climb trees, they chase poultry, they shout and expand their lungs. They roll hoop, play ball, and when older they hunt, fish, swim, and altogether enjoy a life of freedom from restraint. Their clothes fit loosely and give full play to all their muscles, besides covering the body and limbs equally. Who ever hears of such boys having cold feet? The girls of the family are found within doors most of the time attending to domestic concerns, sweeping carpets and breathing dust, cooking or breathing the fumes of cooking. Sometimes sewing or playing the piano between the intervals of study.

When they go out they are dressed in the prevailing mode, and the last word from "Mamma" is a reminder to be careful and not tumble the clean dress. In fact, from earliest childhood girls are made sensible of the weight of responsibility imposed by their dress. Then how imperfectly does custom clothe our girls.

I saw a mother making flannel under suits for her little daughter. They were cut low-necked and short-sleeved, with edges scalloped with embroidery silk, and in length they barely covered the trunk, leaving the limbs with only the muslin covering and embroidery ruffles which came to the knee and their met the fine cotton stocking.

Said I, "Mrs. S., do you make her brother's under-flannels like that?"

She replied indignantly, "of course not."

"And why not, pray?" I asked; "are not the boys full as healthy and strong as she? cannot they better endure having the chest, arms and legs unprotected than this delicate child?"

In a ruffled tone my friend argued that if her girl should wear high-necked flannels with long sleeves she would be sure to catch cold when she laid them off to wear low-necked and short-sleeved dresses, as young ladies are apt to do upon occasion. It was to enable her daughter to present a fine appearance, then, at the full-dress party, which prevented the child from being warmly clad. Is this an isolated case? Alas! no. We find such mothers everywhere in America; but we also find good, sensible ones whose girls, as well as boys, wear flannel suits fitting the form comfortably and covering the body from the neck to the wrists and heels, with stockings outside of either wool or cotton, according to the season. These are the children who are not hindered from indulging in out-door sports, nor are they charged with the care of their clothes while at play. Dress them strongly and loosely and let them run and climb, whether girls or boys, and I'll run the risk of their "unsexing themselves," as the saying is—what it may mean I'll leave for those who use the term in regard to the leaders of woman's rights to enlighten us.

How the Eye is Swept and Washed.—For us to be able to see objects clearly and distinctly, it is necessary that the eye should be kept clean. For this purpose it is furnished with a little gland, from which flows a watery fluid (tears) which is spread over the eye by the lid and is afterwards swept off by it, and runs through a hole in the bone to the under surface of the nose, while the warm air, passing over it while breathing, evaporates it. It is remarkable that no such gland can be found in the eyes of fish, as the element in which they live answers the same purpose. If the eye had not been furnished with a liquid to wash it and a lid to sweep it off, things would appear as they do when you look through a dusty glass. Along the edges of the eyelids there are a great number of little tubes or glands, from which flows an oily substance which spreads over the surface of the skin, and thus prevents the edges from being sore or irritated, and it also helps to keep tears within the lid. There are also six little muscles attached to the eye which enable us to move it in every direction; and when we consider the different motions they are capable of giving to the eye, we cannot but admire the goodness of Him who formed them, and thus saved us the trouble of turning our heads every time we wished to view an object.

Removal of Tape-Worm.—A writer says that in treating some cases of tape-worm he has employed no preliminary provisions beyond forbidding the patient to take any breakfast the day on which it is intended to remove the worm, and giving him a large dose of Rochelle salts the preceding night. At 10 o'clock in the morning a dose is given, made of one

half ounce of bark of pomegranate root, one half dram of pumpkin-seed, one dram ethereal extract of male fern, one half dram powdered ergot, two drams powdered gum arabic, and two drops croton oil. The pomegranate bark and pumpkin seed are thoroughly bruised and, with the ergot, boiled in eight ounces of water fifteen minutes, then strained through a coarse cloth. The croton oil is first rubbed up with the acacia and extract of fern, and then formed into an emulsion with the decoction. In each case the worm was expelled alive and entire within two hours. In each case, too, the worm was passed with the head firmly fastened to the side of its body at about the widest part, from which it was with difficulty removed.

THREE EMINENT PHYSICIANS.—As the celebrated French physician, Desmoulins, lay on his deathbed, he was visited and constantly surrounded by the most distinguished medical men of Paris, as well as other prominent citizens of the metropolis. Great were the lamentations of all at the loss about to be sustained by the profession, in the death of one they regarded as its greatest ornament; but Desmoulins spoke cheerfully to his practitioners, assuring them that he had left behind three physicians much greater than himself. Each of the doctors, hoping that his own name would be called, inquired anxiously who was sufficiently illustrious to surpass the immortal Desmoulins. With great distinctness the dying man answered, "They are Water, Exercise and Diet. Call in the service of the first freely, of the second regularly and the third moderately. Follow this advice and you may well dispense with my aid. Living, I could do nothing without them, and dying, I shall not be missed if you make friends of these, my faithful coadjutors."

FOOD AS MEDICINE.—Dr. Hall relates the case of a man who was cured of his biliousness by going without his supper and drinking freely of lemonade. Every morning, says the doctor, this patient arose with a wonderful sense of rest and refreshment, and feeling as though the blood had been literally washed, cleansed and cooled by the lemonade and fast. His theory is, that food can be used as a remedy for many diseases successfully. As an example, he cures spitting of blood by the use of salt; epilepsy by watermelon; kidney affection by celery; poison, olive or sweet oil; erysipelas, pounded cranberries applied to the part affected; hydrophobia, onions, etc. So the way to keep in good health is really to know what to eat—not to know what medicine to take.

DECAY OF THE TEETH.—What time of day do the teeth decay most rapidly?

Ans.—From midnight till the breakfast hour. The meals of the day help to preserve the teeth by friction and the flow of saliva, which, to a great extent cleanses them of decaying matter; and thus it is that the teeth pass through the day and early part of the night without much progress of caries; but after retiring, the remaining particles of acidifying food, the inspissating mucus, the developing fungi, all combine to make the hours toward morning pre-eminently the period of decay. Then it is that the chalk placed between the teeth late at night and allowed to remain there comes to the rescue, and by its antacid reaction, prevents, in great degree that disintegration dependent upon acidity and parasitic growth.

A TRAVELLER on a miserable lean steed was hailed by a Yankee, who was hoeing his pumkins by the roadside—"Hallo! friend," said the farmer, "where are you bound?" "I'm going out to settle in the Western country," replied the other. "Well, get off and straddle this ere pumkinvine, it will grow and cary you faster than that ere beast."

The Dairy.

Kind Treatment Pays.

MR. WILLARD in his new "Butter Book," speaks in the strongest term, in favor of kind treatment of cows kept for the dairy:

It is really astonishing, he says, what a large difference in the yield of milk it makes by attending properly to a number of small things in the management of stock—things which would seem to many quite too insignificant to be worth observing. The dairyman should have a genuine, hearty love for the animals under his control, attending to every detail for their comfort, providing wholesome nutritious food, pure water and pure air—everything of this kind in abundance—keeping the animals properly sheltered from storms; feeding always with great regularity; paying the most marked attention to the manner and time of milking, and, withal, preserving a uniform kindness and gentleness of treatment throughout every operation, a gentleness extended even to the tones of the voice.

Generally speaking, that cow will do her best that is loved the best and petted the most by those who have her in charge. If you wish a cow to do her best, you must cultivate her acquaintance intimately, and be unsparing in little acts of kindness. You may whip and torture a cow into submission, but she will strike the balance against you in the milk pail. One of the greatest faults among dairy farmers to-day is a lack of kindness and consideration to domestic animals. Cows should be petted daily, and be made to feel that man is a friend and protector. All pain, fright and uneasiness checks the secretion of milk, and the man who is passionate and abusive to his herd never did and never can realize a full yield of milk from it. I think that any one who has the charge of animals should study their character and disposition. It is an interesting study, and, under the law of kindness, you will not unfrequently bring out wonderful traits and exhibitions of affection, which will show a forethought and design which may well be ranked with the higher intelligence of reasonable beings."

The Holstein Cow.

The Holstein bred cows are now attracting much attention in various parts of this continent from their wonderful milking qualities. They are natives of the north of Germany, large, heavy cattle, of compact form, making, when fattened, excellent beef, and being also good workers. They have been grown in Holland for generations, with special regard to their milking qualities. In that country, they are invariably black and white; but in their native Duchy they are found of various colors. The quality of the milk of the Holstein is such as fits it well for the cheesemaker, the globules being small and uniform in size. The skim-milk is of a very blue tinge. The butter made from the cream possesses great lasting qualities.

Several instances are on record, and are well authenticated, where cows of this breed have given large quantities of milk. One cow is certified to have yielded an average of 18 quarts a day for 9 months. A heifer owned in Chemung Co., N. Y., gave after her first calf 15 quarts a day for nine months. An instance is also recorded where a Holstein gave 74 lbs., for ten consecutive days, of milk that yielded 22.70 of cream. The record of a heifer belonging to a Stock Breeders Association in N. Y., State shows that, after her first calf she gave for 12 days 40.65 lbs; for the next month, May 43.17 lbs.; in June, 52.18 lbs.; July, 51.57 lbs.; August, 50.12 lbs.; September, 41 lbs.; October, 33.17 lbs.; November, 27.70 lbs.; being an average per day for the 7½ months, of close upon 45 lbs. Her feed was, for the first month, simply hay with 3 pecks of turnips daily, and afterwards pasture and 2 quarts of corn meal. After Oct. 1, 4 quarts of a mixture of oats, corn and shorts, and ¼ bushel of roots were fed. —*Canada Farmer.*

IN butter making, the object sought is the separation of the butter globules from the caseine and other ingredients of the milk; their retention in a pure and perfect state, and their preservation in that state, for use, with the union of no foreign substances, except a small amount of pure salt. In the process of cream rising this seperation commences, and it is highly important that we adopt a method by which, in this stage of the process, it may be made as complete as possible. The conditions of success, are a right and uniform temperature, rest, protection from taints and evaporation, from the destructive influences of the atmosphere, and too intense light.

TO FRESHEN RANCID BUTTER.—Here is a fact worth a years subscription to a paper: "To a pint of water add thirty drops (about half a teaspoonful) of liquid chloride of lime. Wash in this two and a half pounds of rancid butter. When every particle of the butter has come in contact with the water, let it stand an hour or two; then wash the butter well again in pure water. The buttter is then left without any odor, and has the sweetness of fresh butter. These preparations of lime have nothing injurious in them."

Alderneys and Jerseys.

Alderney is well-known for the breed of cows that bears its name. These are so called because the first ones exported were from that island, although now very few that are sold as Alderney cows are directly from that island. Those of that breed actually exported from these islands are generally from Jersey, where the cattle are much the same as those of Alderney—small, with tapering heads and of a delicate fawn-color. The Guernsey is esteemed by some even more highly than the Alderney. It is rather larger and more of a red, brindled in color. The cows are milked three times daily, and the milk is churned without skimming. One pound of butter a day is by no means an uncommon yield for a good cow. The cow cabbage is made to reach a size so large that the leaves are used to wrap the butter in for market, while the stalks are varnished and armed with ferrules, and extensively used at St. Helier's for canes. The cows are carefully coddled. The grass they feed on is highly enriched by the vraic, a species of sea-weed gathered from the reefs at low tide.

There are two vraic harvests appointed by the Government—one in the Spring, the other in August, although it is gathered at other times in small quantities. All hands turn out in the season with boats and carts, frequently at night, and it is a very lively picturesque occupation, though often attended with loss of life from the overloading of boats or sudden rising of the tide. The cows are always tethered when feeding. They eat less in this way, really giving more milk than when glutted with food, and while they are cropping the grass on one side of the field, it has time to spring up on the other side. When they have done eating, they are at once moved from the sun into the shade. The breed is preserved from intermixture with other breeds by strong and arbitrary laws very carefully enforced. No cattle are allowed to enter the islands except for slaughter within a certain number of days, with the exception of oxen for draught.—*Harper's Magazine for June.*

WINTER and spring butter is often very much injured in flavor by allowing cows to eat the litter from horse-stables. Cows are not unfrequently very fond of this litter, though it is impregnated with liquid manure

from the horses, and if allowed they eat it greedily; and the effect is that their milk and butter will be tainted with the taste of this kind of food, in the same way that the flavor is injured by eating turnips, but to a more disagreeable degree. If litter is allowed to be eaten, it should be given to cattle not in milk, and on no account should milch cows be allowed to consume other than the sweetest and purest food. Very nice butter-makers are sometimes at a loss to account for stable taints in butter, especially when extraordinary precautions have been taken to have the milking done in the most perfect manner, and so on in all the processes of handling the milk until the butter is packed for market. Still, the butter has a disagreeable taint, and the cause often comes from allowing the cows, when turned out to water and exercise, to feed about the horse-stable, where they consume all the litter which, on account of its being soaked with liquid manure, is cast out of the stable.—*Rural New Yorker.*

Butter Product of a Short-Horn Heifer.—In looking over your paper from week to week auy one would suppose that the Jersey cows were ahead of all other breeds in the State for making butter. I think it is a great error. I think there are other breeds that will make more butter on less provender and give more milk than the Jerseys, and make butter of as good quality. I have a thoroughbred Short-horn cow, four years old last March, that made in one week last January eleven and three-fourths pounds of as nice butter as was ever produced by a Jersey cow. It was but seven minutes churning by the clock. Her feed was but four quarts of shorts per day, and as much good hay as she would eat. If any one has a Jersey heifer three years old or past that will beat this I would like to purchase her.—*M. L. Wilder in Maine Farmer.*

High Farming in England and its Results.—At the monthly Farmers' Club meeting, held during the Smithfield show week, in London, the *Canada Farmer* says, the subject under discussion being, "The Future of Farming," Alderman Mechi said, that on his own farm, and many others which he could name, the amount of produce was such that he was convinced that if the whole of the land of England was farmed as it ought to be taking the present rate of consumption, not one-half of the produce could be consumed, supposing there were no foreign importation whatever. At which the farmers present laughed immoderately. The alderman continued and said he could produce plenty of men connected with Norfolk and Lincolnshire who would bear out that statement. "If the farmers of England, as a body, produced what was produced by some of the farmers of those two counties, the people of this country would not, at the present rate of consumption, consume one-half of the total, without any foreign importation." The report does not state whether the laughter was repeated.

Studying Latin.—A good story is told of an old farmer whose son had for a long time been ostensibly studying Latin in a popular academy. The farmer not being perfectly satisfied with the course and conduct of the young hopeful, recalled him from school, and placing him by the side of a cart one day, thus addressed him: "Now, Joseph, here is a fork and there is a heap of manure and a cart; what do you call them in Latin?"

"Forkibus, cartibus, et manuribus," said Joseph.

"Well, now," said the old man, "if you don't take that forkibus pretty quickibus, and pitch that manuribus into that cartibus, I'll break your cussed lazy backibus." Joseph went to workibus forthwithibus.

Fowls moult in August and September. Then take good care of them.

The Horse.

Something About Draft Horses.

A CORRESPONDENT of the *National Live Stock Journal* gives a little history of draft horses in Ills., that must be encouraging to breeders of such stock elsewhere:

The race horse is the gentleman among horses, and the draft horse the laborer. (The laborer makes the money, and the gentleman spends it.) We found that our horses were too near all so-called gentleman horses, and we had too few laboring horses, and that the business of the country demanded stronger draft horses.

In about the year 1843, Col. Oakley imported *Sampson*, a large draft horse of English or Belgian stock, into Central Illinois (Tazewell county.) *Sampson* was a very large, logy draft horse, weighing from twenty to twenty-two hundred pounds. He was so large, that it was with difficulty that the farmers could persuade themselves to risk the extreme cross on their small mares; but they did risk it, and his stock was disseminated largely all through that part of the State, and proved a great success. Before the stock of the imp. *Sampson* was lost sight of, the imp. *Louis Napoleon*, a draft horse of Norman or French blood, made his appearance in the same locality (Tazewell county), in about the year 1855. He gained a large reputation as a stock horse, and he and his descendants were used largely for a number of years in the different counties of Tazewell, Woodford, McLean and LaSalle. The stock of *Louis Napoleon* proved of such excellence that it opened up an active trade, not only in this country, but even in France, England, Scotland and Belgium, and within the past six years caused the importation of hundreds of draft horses from the above-named countries into the State of Illinois alone, placing this State second to no other State in the Union in valuable horses, either for the farm or the markets. We have more than once heard the remark made in Chicago, "Why do the Eastern horse dealers always make such a bee line for Ottawa" (Ills.)? Why because old *Louis Napoleon* made his appearance in La Salle county in the year 1859. The different strains of draft horses that have gained such favor with the public, have stood purely on their own merits; their dissemination is not due to any advice or influence given through agricultural papers. Neither did the agricultural fairs show them favor, until their own merits first placed them highly in favor with the public. The more popular strains of draft horses now so rapidly importing into Illinois and other States are the Norman or French horse, the Scotch Clyde, the English draft, and the Belgian; the Norman or French largely predominating in numbers.

It would seem that the necessary weight in the draft horse has been reached. The weight of eighteen to twenty hundred pounds has become more the rule than the exception among the draft horses now being imported into this country. The draft horse is already bred up to a high state of perfection, yet we can further improve them by carefully and judiciously breeding for more action, with a more combined muscular power and beauty of style.

Colors and Qualities.—I find horses of dark chestnut, true bay and dark brown colors, to be more free from disease than those of other shades, and I hold them up in the front rank for the general qualifications of speed, stamina, docility, size and beauty of conformation. Color itself does not make the difference, but it is caused by the peculiar organization which makes these colors. Among the light chestnuts—erroneously called sorrels—are to be found nine-tenths of skittish, balky horses and those with other unpleasant qualities so much feared and objected to. Black horses have more faulty eyes and feet than other colors, according to my observations. The various dapple-greys are much more liable to warts than horses of other colors.

Still I have seen in horses of all colors qualities to be admired and to be rejected. Among the "buckskins," the various shades of cream, and the spotted, we often find powers of endurance, and sometimes speed, which are somewhat astonishing. These shades are not fashionable, however, and therefore not marketable. Still the old saying is true: "A good horse is seldom of a bad color," I still adhere to my former opinion, that the dark chestnut, true bay and dark brown are the colors to perpetuate in breeding, as in them we have all the requisites of endurance, speed, size, docility and fashion, which fill the whole bill as to our needs or requirements in a horse. *W. Horne, Country Gentleman.*

What To Do With a Dead Horse.—Several agricultural papers recommend cutting up and converting into manure by covering with lime and earth. But it is our opinion that feeding the flesh to chickens is the most profitable way of disposing of dead horses, dead cattle etc. What is not needed at once or while it can be kept fresh for the purpose, should be cut into strips and dried. In this condition it can be stored away in sacks; and a little of it chopped fine every day or two will do much towards increasing the egg product. A fair sized horse is worth $5 to $10 for this purpose, besides trouble of hauling and cutting up, drying, etc.

Agriculture at the Centennial.

The value of the farms and farm machinery, the farm products, and the live stock of the United States, roll up an aggregate of over thirteen thousand million dollars, while the total of the products of our manufactories (less the materials employed) and the capital invested in them is less than four thousand million dollars. To fitly present characteristic specimens, drawn from and fully illustrating this enormous industry of our land, is the duty that devolves upon the agricultural department of the Centennial. The representatives of the ninety million of horses, cattle, sheep and swine noted in the census of 1870, will alone constitute such a grand display as will be worthy of attention; and it might be well to mention just here that one club proposes to exhibit three hundred specimens of neat cattle. The attractiveness of the agricultural exhibit and the disposition to contribute to it, will be recognized when we state that, out of the 12,500,000 persons engaged in all classes of occupations in the United States, 5,922,000, or nearly one-half, are engaged in agriculture.

The trades and industries, too, that minister and are subordinate to the agricultural interests of our country, swell the aggregate seeking space for display in the area set apart for this department. With these few figures, (drawn from the census of 1870) in mind, we may imagine how great a proportion of the visitors will be attracted to the farmers' show the Centennial Exhibition be peculiarly attractive to our own citizens, but, as we are best known abroad by our agricultural productions, so we may anticipate that of the foreigners who visit us in 1876, the specialty which will call the greatest number of them to Philadelphia will be the agricultural.—*Philadelphia Press.*

The New Haven *Register* says: "Henry Bassett, of Hamden, to-day exhibited at our office an egg, laid on his farm by a Cochin Partridge hen measuring 13 inches in circumference and 8 in diameter."

Apiary.

Thou Cheerful Bee.

THOU cheerful bee I come, freely come,
And travel round my woodbine bower;
Delight me with thy wand'ring hum,
And rouse me from my musing hour.
Oh! try no more those tedious fields,
My honied treasures all are thine;
Come taste the sweets my garden yields,
The bud, the blossom, all are thine.

—[Smyth.

Bee Keeping in Southern California.

From the *American Bee Journal* we extract two letters upon bee keeping in California by persons who evidently view the business and country from different tempraments. The first letter is by J. W. Sallie, Anaheim.

Dear Bee Journal:—In my last I promised to tell the "bee men" something of Southern California. First, then, as to

CLIMATE

I do not suppose that there is a better climate on earth than that of Southern California, especially that portion west of the mountains. Such is a large portion of Los Angelos county, it being a beautiful valley, about twenty miles wide and seventy-five long, with a slope of about twelve feet to the mile, from the mountains to the beach. This valley, being west of the mountains, is free from the bleak winds of the desert, and the cold winds from the north, with a regular sea breeze every day, rendering the climate more even than that of Spain, France or Italy; the mercury seldom going above eighty degrees, and rarely below forty degrees. Near the coast it is cooler; but as you approach the mountains, the climate grows warmer, at the rate of about one degree per mile. Near the coast it is too damp and cool for consumptives—but on the west side of the mountain, at an altitude of 1,500 or 2,000 feet, you are above the *fogs* and dampness—and the climate is *just splendid*. There is never any frost at this altitude, on the west side of the mountains—and here is where the bees do so well. In point of

SOIL,

this valley is equal to any portion of the United States. The soil is made by deposits from the mountains, and is inexhaustible, There is, however, only a small portion of it that is susceptible of cultivation without irrigation; this is supplied by water from the mountains, and by artesian wells. These can be had at a cost ranging from $125 to $500. This seems almost incredible to an eastern man, but such is the fact. Many poor farmers, just starting, have their artesian wells, giving an abundant flow, for irrigating their quarter section of land. As to

FRUIT,

there is no end to it here. Almost every variety of semi-tropical fruits grows to perfection here; and the flavor of all kinds of fruits is especially excellent, on the high "masa" lands. Peaches are never a failure; apricots, nectarines, plums, pears, etc., etc., in endless varieties, strawberries the year round, while tomato vines bear continuously, for five or six years. Vegetables without end, and the grape to perfection. Raisins made by the ton, simply by pulling the grapes from the vine and spreading them on the ground to dry.

This valley land is especially adapted to the cultivation and growth of the Alfalfa, or Chili clover, which will feed from four to six cows per acre, the year round, producing a large yield of good milk and butter.

BEES

are also kept in the valley; but the quality of honey is very indifferent, and consequently it is not considered very profitable. Yet bees will increase equally as fast in the valley as on the mountains. The most desirable locality for bees is directly up the side of the mountains, about one mile from the valley, and at an altitude of 1,500 feet, with plenty of sage, sumach, etc., about you, on the mountains. The bees go to the valley first in the spring, and as the season advances, they ascend the mountains, thereby securing a perpetual pasturage.

Bees, *they say*, have not done well this spring, and summer, owing to a frost that fell in April. I took charge of

MY APIARY

on the 5th of May. The bees were all in box hives. I proceeded at once to transfer, which I accomplished in about four weeks; took about 5,000 lbs., in transfering; have all of my hives full of comb, and have taken with the extractor, up to the present date, (July 1st) about 4,8000 lbs. The season is now in full blast, and will continue so for six or eight weeks longer. I have no fears but I will reach 30,000 lbs., from the 150 hives I started with, beside an increase—after "honey for market" is out—of about 300 per cent.

And now, Mr. Editor and brethren, let me say to you all that I have at last found the "place for bees," and I shall not neglect to improve *my* opportunity. So you had better "look well to *your* laurels."

There are other places here, not yet occupied, which would make good bee ranches. But the better plan is to buy out a "squatter," and bring with you about 100 stands of bees to start with. The bees would cost about $1,000, and the 160 acres—with twenty to forty acres tillable land, and a small shanty—about $500. If any "Bee man" wants such a location, etc., I think I could secure it for him for that amount.

There are many points which I would like to talk upon, but must wait till next time.

—

The following letter is from San Diego, name not given:

I came here from Kansas in May, to go to bee-keeping, but found I was four months too late to do anything this year, as bees swarm here in March and April, and from that time to September 1st, are making box honey, and but few are for sale, except from October to January.

They had a hard frost here in April, which stopped swarming, and cut the honey crop very short.

Italian queen-raising might pay, but I think it doubtful, as one-fourth are now Italians. You could not find a location, in my judgment, out of reach of blacks or hybrids, as the mountains have many wild bees in them and the bee-men are already located all over the honey region.

Bee-men complain of losing one-third of their queens in fertilizing this year. Do not think that queens will be sold very profitably. This country wants to be seen to be appreciated—it is not all that fancy paints it. I am very much disappointed and do not think I shall stay, as I left my family East; and if I bring them, they will have to stay here in San Diego, while I go alone up among the mountains, twenty-five to forty miles to the bee-range.

There are no *thriving villages* within a hundred miles from here. This is the *only* village for one hundred miles in *any* direction, and this is as *dead* as can be—always like Sunday in the streets.

Outside of this town there are no churches, and no society you or your daughter would want. Little houses, 15x20 or less, three to six miles apart, with one or two *men* in each, constitute the population, and thus the country is dreary and uninviting. There will be plenty of bees and ranches for sale this fall. Bees in Harbison or Langstroth hives sell at about $10; in box-hives, $3 to $5. Harbison's average, for five years past, is 83 lbs., comb honey—more than most get. This year they will not get half that. They do not know what *extracted* honey is here. I brought two extractors with me, but as *strained* honey is only five to six cents per pound, they will not give me any work extracting.

If you are determined to come, my advice is, stop at Los Angelos, and go ninety miles south of the railroad toward San Bernardino.

Land there, good for fruit, etc., is high; but there you can raise something that way. by irrigating, while in this country you can't raise anything but *cactuses* one year in five.

Harbison gives his men $20 a month, the first year; $40 per month, the second year, and an interest the third year. Do not know the interest.

You might buy 100 hives, bees and ranch, with a shanty, worth $50, for $2,000. I think no one ought to come with less than $3,000, gold, for the first year's work. You might obtain employment—I can't, and dozens of others of us are here doing nothing; can't get work for our board at anything—though I profess to understand the bee business.

I think this whole business overdrawn. Because last year was a splendid success, they thought to make their fortunes; but this year most are losing money.

Preparation of Wax.

Having employed the bees to extract every particle of honey from the combs, put the latter in a clean boiler with some soft water; simmer over a clear fire until they are melted; pour a quart or so into a canvas bag, wide at the top and tapering downwards like a jelly-bag; hold this over a tub of cold water; the boiling liquor will immediately pass away, leaving the liquefied wax and the dross in the bag; have ready a piece of smooth board, of such a length that one end may rest at the bottom of the tub and the other end at its top; upon this inclined plane lay your reeking bag, but not so as to touch the cold water; then, by compressing the bag with any convenient roller, the wax will ooze through and run down the board into the cold water, on the surface of which it will set in thin flakes; empty the dross out of the bag and replenish it with the boiling wax, and proceed as before until all has been pressed. When finished, collect the wax from the surface of the cold water, put it into a clean saucepan with very little water, melt it carefully over a slow fire, skim off the dross as it rises, then pour it into moulds or shapes, and place them where they will cool slowly. The wax may be rendered still more pure by a second melting and moulding, and may be bleached by running it into thin ribands and exposing these to the bleaching action of a grass plat for several days and nights, taking care the sun is not allowed to melt them.—*Manual of Bee-Keeping by John Hunter.*

Bees, Wasps and Grapes.

Some persons imagine that bees injure fruits, and especially grapes. They are greatly in error. It is useful to compare the part taken by bees and hornets in the injury done to our vineyards. First let us consult the books. I do not find a single book on agriculture, fruit or grape culture that does not cite the wasp among noxious insects that should be fought incessantly and mercilessly; while not a single book mentions as such the industrious honey-bee, whose vindicator I now am.

The wasp pierces the fruits; to the grapes it leaves nothing but the skin and seeds. The bee only profits by those spoils; for she usually goes from blossom to blossom, gathering honey in gardens and fields. If at times she is seen in orchards or vineyards, where she only goes after the wasps, it is only to gather the remains of the feast.

Curious experiments have been tried, it appears: Some sound fruits were placed simultaneously within the reach of both wasps and bees; the former have soon achieved

their work of destruction, while the latter starved to death.

Therefore, bees do not eat grapes. So it is with sound conviction that I say to those who wish, if not to prohibit, at least to render impossible the establishment of hives in the neighborhood of large cities, under the fallacious pretext that they destroy grapes: Respect the bee, since she respects our fruits; let her live in peace near us; she never will be ungrateful. Is she not the mysterious instrument that helps and facilitates the phenomenon of fertilization of flowers, and perhaps produces those innumerable and beautiful varieties by carrying pollen from the calycle of one into that of another? Is she not the living image of work, that gives us the perfumed honey and the wax that we use so diversely?—*Mo. Farmer.*

Preservation of Wood.

M. Lostal, railway contractor, has communicated to the Society of Mineral Industry at St. Etienne the results of his observations on the effect of lime in preserving wood, and his method of applying it. He piles the planks in a tank, and puts over all a layer of quicklime, which is gradually slacked with water. Timber for mines requires about a week to become thoroughly impregnated, and other wood more or less time, according to its thickness. The wood acquires remarkable consistency and hardness, and, it is said, will never rot. Wood has been prepared in this manner for several mines, so that the plan will shortly be tested on a considerable scale. Beech-wood has been prepared in this way for hammers and other tools for several ironworks, and it is said to become as hard as oak without losing its elasticity or toughness, and to last much longer than when unprepared. It has long been known that wood set in lime or mortar is preserved from decay, but no systematic plan for its preservation has until now been attempted.

The *Iron. Telegraph* says: We note that the old controversy about tarring or painting shingles and fences, is being revived again, on the principle we suppose that as an old generation passes away the new one wants to learn wholly for itself what it wants to know. It ought, however, to be generally known by this time that not moisture only, but heat and moisture, either or both, are the agents in the decay of woody matter. Most writers seem to think it is moisture alone, and hence all that is required is to coat the wood with some substance that will keep the water out. To be sure they know that heat, when it is up to what we know as the burning point, will destroy wood, but they seem to forget that even when not burning heat is destructive only in a less degree. Any black substance therefore, which attracts heat, though it may keep out the other destructive element, water, adds to the destructive agencies at work on the wood, and should be avoided wherever duration is an object.

It needs no understanding of these laws, however, to know that tar or any black substance tends to rot wood away much faster than wood that has had nothing at all done to it. A fence tarred and exposed to the full sun, as any observer knows, soon crumbles away. In a few years the wood is like an overdone pie crust. And then all know how long a mere whitewashed fence lasts. Yet there is no preservative character of much account in lime. Every rain goes through it into the wood, but it is the white color, which rather turns away the heat than attracts it, which is in that case the great agent which preserves it so long.

In all discussions as to the preservation of wood by paints or coatings, therefore, we see that the color of the washes or paints is an important point in the argument. As for tar, it is the very worst thing that could be used where there is exposure to the sun. Under ground, or where there is no heat for it to attract of consequence, it is another matter, and does possess more or less preservative power.

Poultry Yard.

Fattening Chickens.

It is hopeless to attempt to fatten chickens while they are at liberty. They must be put up in a proper coop, and this, like most other appurtenances, need not be expensive. To fatten twelve fowls, a coop may be three feet long, eighteen inches high and eighteen inches deep, made entirely of bars. No part solid—neither top, sides nor bottom. Discretion must be used, according to the size of the chickens put up. They do not want any room, indeed, the closer they are the better, provided they can all stand up at the same time. Care must be taken to put up such as have been accustomed to be together, or they will fight. If one is quarrelsome, it is better to remove it at once, as, like other bad examples, it soon finds imitators. Diseased chickens should never be put up.

The food should be ground oats, and may either be put up in a trough or on a flat board running along the front of the coop. It may be mixed with water and milk, the latter is the better. It should be well soaked, forming a pulp as loose as can be, provided it does not run off the board. They must be well fed three or four times a day, the first time as soon after daybreak as may be possible or convenient, and then at intervals of four hours. Each meal should be as much as they can eat up clean, and no more; when they have done feeding, the board should be wiped up and some gravel spread. It causes them to feed and thrive.

After a fortnight of this treatment you will have good, fat fowls. If, however, there are but five or six fowls to be fatted, they must not have as much room as though there were a dozen. Nothing is easier than to allow them the proper space, as it is only necessary to have two or three pieces of wood to pass between the bars and form a partition. This may also serve when fowls are up at different degrees of fatness. This requires attention, or fowls will not keep fat and healthy. As soon as the fowl is sufficiently fatted, it must be killed; otherwise it will not get fatter but will lose flesh. If fowls are intended for the market, of course they are, or may be fatted at once; but if for home consumption, it is better to put them up at such intervals as will suit the time when they will be required for the table.

When the time arrives for killing, whether they are meant for market or otherwise, they should be fasted without food or water for twelve or fifteen hours. This enables them to keep for some time after being killed, even in hot weather.—*Journal of Chemistry.*

Hens Eating Eggs—A Cure.—A correspondent of the *Poultry Bulletin* says: "Having seen a question asked how to cure hens from eating eggs, and having been put to my wits end to devise some means to stop them, I finally by accident hit upon a plan that I have never known to fail. One great trouble with many breeders is, they make their hens' nests too large, and with Brahmas and Cochins the nests are near the ground, and in many cases the eggs are in view of the hen. This was the case with my nests. Having tried every available stuff, such as pepper, mustard, turpentine, and every thing I could hear of, but no cure. I then took a common nail-keg, cut it in two or a piece about eight inches high, and placed it in the box where the hens laid. I then put in an egg; the old hen mounted the nest or keg and tried to reach the egg, standing on the edge of the keg, but it was no go; she then got down in the keg, but that was a failure, for she did not have room to get at the egg; after trying for some time she gave it up as a bad job. I have never had an egg eaten by the hens since then; all of the nests in my coops have a piece of a keg in the box, and have parts of kegs for nests. Do not make them too deep, but deep enough so that the hen cannot reach the bottom when standing on the edge of the keg. You that are troubled with hens eating their eggs, try the plan; it costs but little, and I think you will never regret the trouble it will be to outwit the old hen."

Vermin on Fowls.—There are at least three different kinds of lice which infest poultry and their quarters. (We do not now include the *acarus*, that produces what is known as "poultry itch" and "scabby or scurvy legs," etc.) There is the large louse found for the most part in the heads of young chicks. This is quite destructive to the broods, and by some is supposed to be the parent of the gape worm. Whether this supposition is true or not this louse will certainly destroy young chicks unless it is removed and the broods protected from its attacks. Then there is the common body louse, found mostly under the wings and the more inaccessible parts of the skin. These are, perhaps, the least noxious of any of the different kinds; but they evidently annoy the fowls and should not be allowed to remain on them.

The third class of lice is the small red "mite," found only in the house or roosting places and nests. These are, perhaps, the most annoying and troublesome to the fowls of all, and are more numerous than either of the other kinds. They may be found in nearly all roosts and houses that have been used by fowls one or more years where especial care has not been exercised to exterminate them. They stay in crevices on the roosts or walls and nests-boxes during the day and creep upon the fowls and feed at night. They are seldom found on the fowls during the day, except on sitting hens. These are the ones that are so annoying to the brooding hens, forcing them to abandon their nests. They are sometimes found in great numbers in neglected quarters.—*N. Y. Herald.*

How to Feed Fowls.—Fowls are not fed merely for the sake of keeping them alive and healthy on the least possible amount of food. We wish to convert the food into flesh or into eggs. In feeding for quick fattening, it is understood that the poultry should be made to eat as much as possible. My rule for feeding is to throw out the feed once a day, and let them eat as much as they want, and no more. I want the fowls to eat all they will; the more they eat, within reasonable bounds, the more eggs they will lay, and the better condition they will be in. Laying fowls should take exercise, but if they can go to a trough and eat any time they wish, they will take next to none. If fed but once a day, they will wander and hunt insects much more. If fed soft feed, such as wheat bran alone or mixed with milk, they will be hungry again in two or three hours, and be off after insects, &c.

Shrinkage of Fruit in Drying.—In the letter from Charles Alden (owner of the fruit-drying machinery) which was read before the late horticultural meeting at Rochester, New York, he states that a bushel of apples weighs fifty pounds; that the cost of cutting and preparing a bushel for drying is about fifty cents; and that a bushel will yield nine dried pounds, two pounds of which are cores and skins, which, when dried, find a ready market at six cents per pound for making jelly without sugar or boiling—a new product. One bushel gives seven pounds of good dried apples, which will sell regularly at twenty cents per pound; making after drying, $1.25 per bushel of apples, with cores and parings. It will be understood that these dried apples are greatly superior to common dried apples, made by exposure to weather, flies, etc. Tomatoes, being very watery, yield only three pounds dried per bushel, but two dried ounces are found to be equal in substance to a one quart can, and will make as much by adding one quart of cold water and stewing properly. The evaporated tomatoes sell for seventy-five cents per pound. Peaches yield seven pounds from a bushel, one of which is skins.

Horticulture.

Plant Olive Trees.

THERE is no risk in planting olive trees in the southern part of our State, for there they have grown luxuriantly and borne fruit abundantly for nearly a hundred years. The fine olives of the church gardens in San Luis Obispo have yielded fruit since 1782. The olive orchards of San Diego, San Fernando, San Buenaventura and Santa Barbara, have all flourished and given forth their exquisite berries for nearly the same length of time. Thus it will be seen that there is no experimental risk in trying to grow olive trees almost anywhere in Southern California; and we have seen them doing nicely on the foothills of Monterey, Santa Cruz, Santa Clara, Alameda, Contra Costa, Tuolumne, Calaveras and Amador counties, and believe that they will succeed well in parts of forty out of the fifty-three counties in our State, at a certain height on the hills, so as to come within what is termed the warm belt. It is a tree that can be easily raised in this climate, requiring but little or no irrigation, and once it has taken root, will grow with about as little care as any of the ornamental sorts of trees planted on this coast. And there are but few trees more beautiful to the eye than the olive after it commences bearing. Its oblong, lance-shaped leaves, with their deep green shade on top and light feathery color underneath, when disturbed by the gentle winds produce a peculiar and pleasing effect. The trees grow to the height of from thirty to forty feet and its branches spread laterally in every direction, with an erect, jaunty form, making a very inviting shade-tree for roadways and dwellings accompanied with the substantial advantage of bearing fruit that will pay for the cultivation.—*Pacific Grocer.*

Tamarind.

This beautiful tree is a native of the East Indies, but is now considerably cultivated in warm climates elsewhere. Only one species seems to be known—a spreading tree, thirty or forty feet high, with alternate pinnate leaves, which have from twelve to fifteen pairs of small leaflets, and fragrant flowers with three petals, the pods brown and many-seeded, as thick as a man's finger and about six inches long. The pods are filled with a pleasant, acidulous, sweet, reddish-black pulp. They are usually preserved by putting hot syrup on the ripe pulp, but a better method is to put alternate layers of tamarinds and sugar in a stone jar, the color and taste being thus more like those of the fresh pulp.

The wood of the tamarind tree, and especially, of its roots, is a cabinet wood of much beauty but of extreme hardness, so that it is wrought with much difficulty.

On chemical analysis, the pulp is found to contain citric, tartaric and malic acids, potash, sugar, vegetable jelly, etc.

As salt of copper is a common adulteration, a piece of polished iron—a knife for example—should be plunged into the pulp and left in it for an hour, when, if copper be present, it will be deposited on the iron.

The pulp is cooling and gently laxative, and is often employed in febrile complaints. It is used in India as a soothing article of diet, and a kind of sherbet is made from it. It is also an excellent addition to curries.

Tamarind tea is made by infusing them in boiling water; when cold it forms an agreeable and cooling drink in inflammatory and febrile disorders.

Whey is prepared by boiling an ounce of tamarinds with a pint of new milk, and straining. This also is an excellent drink in similar cases.

Oranges and Lemons.—Orange and lemon plantations, in the Mediterranean countries, are called gardens and vary in size, the smallest containing only a small number of trees, and the largest many thousands. The fruit is gathered in baskets similar to peach baskets, lined with canvas, the basket being held by a strap attached and passed around the neck or shoulders. From the garden the fruit goes to the repacking magazine, where it is removed from the boxes in which it was packed in the gardens, and repacked for shipment by experienced female packers, after having been carefully assorted by women and wrapped in separate papers by young girls. As many as five hundred persons, mostly women and children, are employed by some of the fruit-growers in their gardens and magazines in gathering, sorting and repacking for shipment, the wages paid them varying from nine to sixteen cents a day. A full-grown orange tree yields from five hundred to two thousand fruit annually, and arrives at the bearing state in three or five years, as does the lemon tree. In sorting, every fruit that wants a stem is rejected. The boxes are then securely covered, strapped and marked with the brand of the grower, when they are ready for shipment. Twenty years ago this trade was nothing in its commercial characteristics, or the inducements it offered to capitalists. Now it is progressing with giant strides into prominence, and is a considerable source of revenue to the Government.

Mushrooms.—In the whole range of garden crops there is not one of easier cultivation or more certain product. To grow these fungi on a small scale for family use, procure two cartloads of good, fresh stable manure and shake out the longest straw, then turn it over in the open air two or three times to get rid of the rank steam. When this is done take the dung into any shed or outhouse, and mix with it thoroughly about four barrowfuls of ordinary fresh soil. The bed is then to be made up on the floor of the shed or room to the depth of about twelve inches, pressed rather firmly, and spawned when at a temperature of between 75 and 80 degrees. A covering of about one inch of good strong loam in rather a rough state is then added and beaten level with a spade. By using heavy loam as a covering, the mushrooms produced are of a much more solid character than when light, sifted soil is used. They are consequently more valuable, commanding a much higher price in the market. The whole is then covered up with at least nine inches of straw or long litter.

Here, in a nutshell, is the whole secret of growing this most delicious of esculents. We know a lady near Baltimore, who, by the above process, not only supplied her own table with mushrooms, but had enough to spare to bring her the snug sum of $1,500.—*Turf, Field and Farm.*

To distinguish mushrooms from toadstools: 1. Sprinkle a little salt on the spongy part or gills of the sample to be tried. If they turn yellow they are poisonous, if black they are wholesome. Allow the salt to act before you decide the question. 2. False mushrooms have a warty cap or else fragments of ments of membrane adhering to the upper surface, are heavy, and emerge from a vulva or bag; they grow in tuft or clusters in woods, on the stumps of trees, etc., whereas the true mushrooms grow in pastures. 3. False mushrooms have an astringent, styptic and disagreeable taste. 4. When cut they turn blue. 5. They are moist on the surface, and generally—6. Of a rose or orange color. 7. The gills of a true mushroom are of a pinky red, changing to a liver color. 8. The flesh is white. 9. The stem is white, solid and cylindrical.—*Ohio Farmer.*

People who must draw the line somewhere—anglers.

Pisciculture.

Fish Culture.

MR. TENNYSON'S allusion to the slow movement of science from point to point is very true in general, for by the time we are reaping the benefits of an improvement we often forget its inauguration. The progress of fish culture, however, is a notable exception. It is only a very few years since it was thought of in reference to our own waters, and the actual adoption of public measures to that end is still fresher in our memories. The result is already evident to every one in this vicinity who has occasion to pay market bills; and in all the States where efficient commissions have been appointed, for two or three years a like increase in the supply of fish and decrease in the prices is noted. Indeed, the fishermen and dealers are in some quarters grumbling because they have to take and sell more fish in order to make their accustomed profit; but they will not be apt to arouse much sympathy in the public heart on that account. In the Hudson River, this spring, the shad are very abundant and of excellent quality. As some five million artificially hatched young ones are set free every year, and the catch can not, under existing conditions, much exceed a third of that number, the prospect is that we shall see a still further increase. Probably it would be well for us, as a people, if we ate more fish and less meat, and as our waters are adapted for the cultivation of a score or two of species, we should not lack a varied bill of fare. Then, too, there is the moral effect upon the rising generation. What small boy, not abnormally developed in the back of his head, will not prefer to go a fishing, with a fair chance of good luck, to engaging in the mischievous pursuits now so common to his kind? We regard the black bass recently introduced in our inland lakes and streams as potent missionary agents for the reclamation of youthful criminals. If Jesse Pomeroy had been able to keep his mother's table supplied with fish, perhaps he would not have been the murderer that he is. —*Gro. and Prov. Review.*

Fish Interchange.—Prof. Baird, United States fish commissioner, has received a consignment of live fish from the Danube. They were four weeks on the way. Of the three hundred shipped only 27 were received alive. They have been sent to Mr. Hessel, one of the Maryland fish commissioners. Seven of them are carp, eight gold tench, and eleven common tench. Mr. Hessel expects at least 2,000,000 eggs from these specimens this season. In return for the courtesy, Prof. Baird has sent to Germany 100,000 shad eggs. The eggs will be sent on flannel trays, arranged in a case, the cloth being kept moist by dripping water. This arrangement is the patent of N. W. Clark, a Michigan pisciculturist. The hatching of the eggs cannot be retarded more than five or six days, and they will then be transferred for hatching to water in patent cans, by the two persons whom Prof. Baird has selected to take the shad to Europe. After landing to Bremen the young fish will be carried to the river Weser, where they will be put as far as possible from the mouth of the stream.—*Prairie Farmer.*

Very Singular.—"A curious method of fish hatching is said to be followed in China. Having collected the necessary spawn from the water's edge, the fisherman places a certain quantity in an empty hen's egg, which is sealed up with wax, and put under a setting hen. After some days they break the egg, and empty the fry into water well warmed by the sun, and there nurse them until they are sufficiently strong to be turned into a lake or river."

This is certainly a curious mode, and we

will add that when the young fish begin to feed, they come out of the water at the call of a hen, when she finds a grain of corn or a worm; and after their return from sea, the fisherman catch them by imitating a clucking hen, and thus call them on shore. Queer people, queer fish, queer editors of agricultural papers, who print such stuff in their attempts to get up items on fish culture, when they have no idea of its very first principles. We meet this "item" often, and as it seemed incomplete, we have taken the liberty of finishing it.—*Live Stock Journal.*

How to Feed Young Fish.—N. A. B., Dunbar, Colorado, propounds a question to Dr. W. A. Pratt, of Elgin, Ill., to which the Dr. responds. The question is: What, in your opinion, is the best apparatus now in use for preparing the food for young trout, its cost, and where it may be had?

Any sausage grinder will answer the purpose. After grinding, chop with a knife, mixing a little water with it, but almost as early as the young fish commence to eat in the spring the green fly comes, and by running a wire across a pond and hanging a piece of liver upon it, the fly will "blow" it, and about the third day the maggots will commence dropping off, which will last the fish about two days, which makes an excellent food, and prevents fouling of the water. By hanging on some liver or a piece of meat once in two days, you can have a constant dropping of food for the young fish, and a very excellent food. There will be much less odor than one would expect. The liver or meat should not be hung more than a foot from the water.

Fish at the Centennial.

It is the desire of the Centennial Commission of the International Exhibition to afford all reasonable facilities for the exhibition of fish and the various appliances and processes used in fish culture.

All parties engaged in the propagation of fish as a business pursuit, will, no doubt, find it of advantage to exhibit; as also, those who are engaged in the manufacture of appliances for the culture and capture of fish.

It is therefore suggested that the Commissioners of Fisheries of the various States, take such concert of action as may surely accomplish so desirable an object. Individual effort, however praiseworthy, can hardly be relied upon as expressing the importance and prospective extent of this new national industry.

The exhibition will open May 10th, 1876, and will continue for six months. The details of arrangement for a display of fish and fish breeding apparatus will be under the administration of the Bureau of Agriculture.

The Woman's World.—Although they may not be willing to acknowledge it, the happiness of the race depends to a great extent upon women. They regulate the domestic life, and upon it, more than upon the great events which fill the pages of history, depend individual peace and comfort. Probably few things have more to do with the happiness of a household than the presence or absence of that exquisite tact which rounds the sharp corners, and softens the asperities of different characters, enabling people differing most widely to live together in peace, checred by mutual good offices. The possession of this quality is the especial characteristic, and its exercise one of the most delightful prerogatives of womanhood. We may be willing to lose all, to die, if need be, for those we love, but if we do not, from day to day, abstain from the little unkind or thoughtless acts which interfere with their comfort, we shall utterly fail to make them happy, and their hearts will inevitably escape us. The heroic and magnificent acts of life are few. To many but one, to most none comes in a lifetime. Therefore influence can only come through the right performance of the "trifles" which "make the sum of human things."

Women.

Duties and Privileges of Women.

BY M. E. THOMASSON.

Dear *Sister Readers of the Agriculturist*:—I had hoped long ago to have made your acquaintance, and enjoyed with you through the columns of our favorite journal, many social chats; but sickness and home duties have kept me silent; I have swept, dusted, and chased the flies; I have cooked, washed dishes, and darned the holes in my husband's socks, because those things must be done. Common opinion gives all such work, and very much beside to the wife. In this way much has been thrust upon woman that does not properly belong to her, and much withheld from her to which she has a just claim; I do not allude to the ballot box. It is my opinion that the right of suffrage would not help the matter, nor enable woman to do anything for which her constitution or her education has not fitted her; beside, does she not already exercise a voice in political affairs?

The life of men and women are inextricably intertwined; everywhere they are inseperable companions, giving and receiving influence; consequently the male vote is the product of both male and female thinking. One will seldom find an intelligent woman ignorant of the aims of political parties, but to require her to walk out on election day and deposit her individual vote, would be, to add to that chain of injustice, already too long.

Much has been said and much written, about woman's rights and woman's wrongs. My opinion is, were the wrongs removed, the rights would naturally assert themselves; but here lies the trouble, the wrongs have rooted themselves so firmly and assumed such natural colors, that any hasty attempt to uproot them, threatens unpleasant consequenses. Time, patience and education are the champions to accomplish this work. Woman must learn to distinguish between her real duties, and those imposed upon her through the custom of ages; she cannot do this without a proper knowledge of the laws that govern mankind.

I read an article in Sunday's *Ledger*, written by "somebody who thinks he knows all about it" and I believe he does know more about it than some folks. He gives his opinion of "what men need wives for:" "It is not to sweep the house, make the bed and cook the meals chiefly that a man wants a wife; if this is all he needs, hired help can do it cheaper than a wife; if this is all, when a young man calls to see a lady, send him in the pantry to taste the bread and cake she has made; send him to inspect needlework and bed-making; or put a broom in her hand and send him to witness its use. Such things are important, and the wise young man will look after them; but what the true man wants with a wife is her companionship, sympathy and love." How beautifully such sentiments harmonize with the original design.

I think it quite likely that Adam knew more about bread-making than the men of this generation know.

Men boast of their wisdom in this age; consider their laws just and equal; and declare that all the relations in life are properly and impartially arranged; but there never was a graver mistake. Where is the wisdom in sealing the fountains of useful knowledge to only one half of the human race? Would it not be as well to fertilize the mind and enrich the soul of woman as of man? It is the mothers of a country that shape its destiny. "As the child is nursed on the bosom of its mother so, on the character of woman the internal character of the race is formed and shaped.' How necessary then that woman be thoroughly trained in all the branches of learning which her children will need; it requires a cultivated understanding, and a well disciplined character to form the principles of the young; as the mother instructs, so the future man will think; the paths she marks he will follow; the prejudices she instills he will nurse; the generous fires she enkindles he will keep alive, and all for the good or the evil of his country and of humanity. It is for man to "shake the senate and the field;" to act his part bravely before the world; but at home and in the social circle is seen the perfection of womanhood; which perfection does not consist, (as some may imagine) in the wife's ability to accomplish the drudgery for a large family. There are homes, Alas! in which a woman is only a machine; turning out all sorts of work from dawn till dark while her children are growing up, deprived of their most sacred rights, remembering at last only the frown of a worn and weary face. Some of these sad homes the cruel hand of poverty has made; and in them manly hearts have bled for lack of power to shield a fair form; but ignorance and injustice have made many more than has poverty, and it behooves the world, if she would grow in power and in greatness, to see that the laws of God are respected.

Gilroy, Sept., 1875.

Woman the Equal of Man.

I have faith in man, but I have greater faith in woman. In many countries she has been, and still is, an article of merchandise. She has been educated as an inferior, and until the last few years has been denied an equal education in all the higher institutions of learning. But she has steadily advanced, socially and intellectually. The educated woman of our day would have been the wonder or horror of early civilization. She has attained, and holds without attack, a degree of liberty and various efficiency which would have violated the customs and shocked the prejudices of olden days. At each change and at every upward step have stood those pleaders whose posterity are yet reasoning in the same manner, affirming that already she was in her right place and should stay where Providence had placed her. For those who reason with faces prone to earth, think always that the state to which the world has grown in this day, is all that God meant it should ever be. Men of great conceit have even thought that time was ripe in them.

At length woman interested herself in literature. When she became a reader, men no longer wrote as if for men. She enforced purity and higher decorum. When she became a writer, men saw that guiding star which led them where the young child of Christian purity lay; for after all it is the pen that is the tongue of the world, and a woman's hand is becoming more influential than the orator's mouth.

Thus, step by step, against prejudices and arguments of her unfitness, against rude pushes downward, and much advice as to her proper duties (which in the main have been the drudgeries that men dislike) woman has advanced to a wider plain, to higher duties, to the liberty of following freely her own natural gifts, and to the reluctant recognition of her right to do whatever she could do well. Nor have the prophesies that, like bats, have flitted about her, been fulfilled. In the enlargement of her sphere she has forsaken no

duty of home and lost no grace of tenderness and love. She has become a better mother, daughter, sister, friend, by just that enlargement which it was predicted would unsex her. Experience has shown, that as woman is made to be worth more to society at large, she becomes richer at home, and is capable of building it better and administering its duties more skillfully and refinedly. Woman is not best in the family in those communities where she is most secluded. She is richest in all household excellencies in those which grant to her the liberty of widest activity, and motives to the exercise of her talents upon the largest scale. That vulgar and threadbare maxim, that "a woman ought to stay at home and take care of her husband's clothes and provide her children's food," is, as it were, a switch cut from the great tree of Arrogance, under which the despotic have always sat, and from which the strong have always cut their bludgeons and cudgels wherewith to strike down or chastise the week. A woman is better fitted for home who is also better fitted for something else. It is generous culture, it is power made skillful by exercise, that makes both men and women rich in domestic life. Whatever makes her a better thinker, a larger minded actor, a closer observer, a more potent writer or teacher, makes her, by just so much, a better wife and mother. No one is a better friend for being ignorant—no one a more tender companion for being weak and helpless. Our homes demand great hearts and strong heads.

Woman has proven her worth. Her motto has been onward, and to-day she stands not in man's shadow as an inferior being, but by his side as his equal. She is ever ready to share his prospefity or his adversity. She has a smile for his joy or a tear for woe. All along the earth-path, from the cradle to the grave, woman is man's ministering angel.—*Mrs. J. B. H. in Rural World.*

An Oft-Forgotten Fact.

A workingman once said, when the woman suffrage amendment was under discussion;

"What should my wife want to vote for? She doesn't earn a cent."

I suppose the man had the idea that the vote represented mainly money interest. Since his wife had no property and did not receive any money except through him, what rights had she?

"How much do you earn?" asked Miss H.

"Twelve dollars a week."

"How many children have you?"

"Five."

"Any hired girl?"

"I should think not, with five children to support on twelve dollars a week."

"Then your wife washes, sews and cooks for you all?"

"Of course."

"How much do you suppose it would cost to hire all that done?"

"Oh, I don't know; a great deal more than I can earn."

"And yet you say your wife doesn't earn a cent."

"Well, I never thought of calling that earning money."

"She does just as much toward keeping the family together as you do, and has just as much interest in what affects your trade or your children's welfare."

The man looked thoughtful, as if a new light was dawning upon him.

The gold dollar gets its value from arbitrary law and consent of the commercial world, and it makes no difference whether a day's labor produces from the mine one dollar or one hundred dollars. The power that fixes the value of the dollar in gold can as easily fix that value in any thing else it puts its coinage stamp upon.

Overcome evil with good.

Miscellany.

United States Land Patents

A GREAT many persons in California are uninformed of the true import and legal effect of a land patent of the United States. They believe that such document conveys to the patentee a clear, perfect and unassailable title to the land therein described. This belief is erroneous respecting Mexican Governments to their subjects and citizens in California. A patent from the United States for such lands is a writing given by the authority of the Government, duly authenticated by the proper officer, ceding to a certain person or persons all the right, title and interest of the United States in certain lands, held under genuine grants or titles from the former government of California. Such patents are simple quit-claim deeds from the United States, ceding all the said rights of our Government in and to all such lands particularly described in each patent issued to the respective patentees without prejudice to the rights of all other parties who may contest such patents in any court of competent jurisdiction, either on the ground of fraud in obtaining the same, or on allegation of holding a prior legal possession of portions of the land described in such patents. It is a notorious fact that great frauds have been perpetrated by astute landgrabbers and their associates for obtaining United States patents to lands in California, and many thousands of acres that really belong to the public domain, have thus been stolen by the connivance of lawyers and officials, who have procured and permitted the illegal extension of Mexican grants and mineral lands far beyond the true boundaries thereof, by *floating* the former over immense tracts that never were comprised within the limits expressed in the grants made by the Spanish and Mexican Governments, and by changing the true location of the latter, or in augmenting the quantities of the same, by the use of fictitious names, for obtaining more of such land than the law allows for each mineral claim. Settlers, who in good faith have occupied such public lands to the extent allowed by law, in the absolute certainty that their claims were situated upon public lands, and confiding in the probity of government officers for the protection of the same against insatiate land-grabbers, have been much harassed by lawsuits instituted by the latter for depriving the settlers of their lands thus pre-empted; and after much annoyance and expense, all their remonstrances and allegations have been disregarded. United States patents have been issued in favor of the land-grabbers, embracing hundreds of pre-emption claims situate upon Government lands. The settlers upon the same have been sued in ejectment and for damages in fabulous sums. The grabbers, as plaintiffs, triumphantly exhibit their United States patents to the same lands as positive, undeniable proof of their title thereto, and an irresolute or indifferent, ignorant judge decides in favor of the grabbers; whereby the settlers are compelled to accept the alternative of purchasing their claims at the arbitrary prices demanded by the grabbers, or of abandoning the same to go forth with their wives and children in search of new homes, and perhaps again become victims of oppression. There is no exaggeration in this statement. It is a true but lamentable account of cases that really have occurred in California. We say that such oppression is lamentable because it is illegal, and consequently unjust, that the rights of American citizens should be so scandalously disregarded by the officials whose sworn duty it is to protect land claims legally acquired, and also to defend the public domain from the unscrupulous robbers thereof, to the detriment of honest settlers and of the Government.—*News Letter.*

How a Settler was Outraged by Law.

On several occasions we have drawn public attention to the uncertainty of results when one goes to law without money. Nowhere has this fact been more fully impressed on us than in the ejectment suits started by Jack Sutherland. Mr. Hall was a neighbor of Bullard, whose land was recently in controversy, and had filed upon a quarter section, three-fourths of which was involved in the same controversy. When Bullard was dispossessed, Hall was dispossessed of these three-fourths also, by having his personal effects placed, by the sheriff, upon the undisputed fourth of government land. And since he intended to contest further for the whole quarter-section, he thought it not advisable to pay out for the fourth. He soon found his home covered by a new filing, and to-day he finds himself in the county jail, working out a fine of fifty days for having trespassed upon this land. Here we have the case of a man who entered upon a piece of land regularly surveyed by the United States authority, and knowing that for the last twelve years it has not been submerged. His filing was accepted in due form at the United States Land Office; and then, inch by inch, a swamp land claim shoves him from a home he has occupied for years, and incarcerates him for having been there at all.

Alas for Freedom! if her sons
Must linger in a felon's cell,
For daring to assert the rights
For which our fathers fought and fell.

—[*Visalia Delta.*

Short Weight Cheats.

The *Pacific Grocer* which is fighting against short weights etc., thus aims a shaft at "ye honest producer."

We have been rather free in censure of the course of manufacturers and packers in putting up short weights and measures, adulterating, etc., and we now send our greeting to those self-constituted models of honesty, purity, and simplicity—the Grangers. There is perhaps not a box of butter carried into this market containing full weight as represented by the number of rolls. This butter cheat is one of the favorite tricks of your "Mr. Hayseed." We have known him to refuse to have his butter put on the scales when trying to make a sale to a country merchant. He will say, "If you can't take my butter by the roll you can't have it at all;" and straightway he moves on to find some dealer who will take the butter, which will not average more than one and three-fourths pounds, at two full pounds each, and pay a high price for it. Again, Mr. Hayseed, we call your attention to your uniform method of sacking potatoes. You always put big ones on the sides, top, and bottom, and fill in with worthless little things, with a liberal quantity of clods of earth, small stones, and the like. Your apples, peaches, strawberries, and other fruits, are put up much after the same method, while your cord of wood usually consists of about three-fourths of the standard measurement, cunningly packed into a narrow frame so as to represent the appearance of a large bulk. Then your hay bales have been found to contain many pounds of adobe clods, with a liberal sprinkling of worthless rubbish from the baling ground. It is also currently reported that a rotten egg is considered as valuable to you as one fresh laid, and that it is the loyal duty of your fraternity to sell off the sick chickens to the good-for-nothing town people, so as to realize on them before they die.

The largest field of pineapples in the world is one in the Eastern District of New Providence, in the Bahamas. From one spot can be seen, at a single glance, 1,200,000 pineapples growing.

Subscribe for the Agriculturist.

EXCHANGE NOTICES.

As the time of the year is near at hand when most families should be thinking what periodicals they will subscribe for, for another year's reading, we make notice of some of our best exchanges and will continue the list another month.

First we call attention to Stock Jonrnals :

THE FARMERS' STOCK JOURNAL

Devoted to the development of the agricultural resources of the great west, and advocating the breeding and improvement of live stock whether in the hands of breeder or farmer, and published monthly by Alexander Charles, Ceder Rapids, Iowa, at $1.50 a year, is an excellent Journal of its class, and brother Charles is a practical man, schooled to labor on a farm, and knows how to run a paper for farmers. (See advertisement in our columns.)

THE NATIONAL LIVE STOCK JOURNAL

Published at Chicago, Ills., by Geo. W. Rust & Co., is one of the Standard Stock Journals in America. It is nicely gotten up, contains much valuable matter for stock men and farmers and should be seen by all., $2.15 a year. Sample copies. 18 cents in postage stamps.

THE IOWA FINE STOCK GAZETTE

Is another lively little journal, only $1.10 a year ; published at Vinton, by C. R. Wilkinson & Co., and devoted exclusively to the improvement of live stock raisers and dairy men. Sample copies, 10 cents.

THE COLORADO FARMERS' AND LIVE STOCK JOURNAL

Is published monthly at Denver, Col., $2 a year, by J. F. Wilber & Co. Sample copies 18 cents. It contains a variety of reading on agricultural subjects.

THE DROVERS JOURNAL

Is published at the Union Stock Yards, Chicago, Ill., weekly at $2.00, by L. H. Goodall & Co. Its live stock market reports are copious and correct, also other matters quite comprehensive.

THE AMERICAN SWINE AND POULTRY JOURNAL

Is another Iowa publication, published at Cedar Rapids by Ward & Darrah at only $1.00 a year. It is a very nicely gotten up monthly, and for those who are in search of information in any branch of these specialities, we reccommend it. A sample copy will be sent for 10 cents.

THE NORTH-WESTERN POULTRY JOURNAL

And Pigeon and Pet-Stock Advertiser, is published monthly by T. T. Bachelier, Minneapolis, Minn., at only $1.00 a year, and will be found interesting and instructive. Sample copies, 10 cents.

We find upon our table two excellent compact little monthlies devoted to Bee-Keeping.

THE BEE KEEPERS MAGAZINE.

A journal devoted exclusively to bee-culture, is published in New York City by King & Slocum, at $1.50 a year. Send 15 cents for sample.

THE AMERICAN BEE JOURNAL,

And National Bee Journal consolidated, published at Chicago, Ills., by Thomas G. Neuman at $2.00 a year is the other one. Sample cpies, 20 cents.

These Journals are similar in style and contents, and we are puzzled to choose between them if we would.

Of Health Journal's we now notice :

THE SCIENCE OF HEALTH.

A monthly advocate of correct habits, devoted to health on hygienic principles. It is published by S. R. Wells & Co., New York, at $2.00 a year. Single copies 20 cents. This is a sterling health magazine.

THE LAWS OF LIFE

By Dr. Jackson, published at the celebrated "Home on the Hillside," Danesville, New York, monthly, $1.50 a year, is a choice health periodical. 15 cents a sample copy.

THE HEALTH REFORMER

Is published by the Health-Reform Institute, Battle Creek, Michigan. $1.00 a year ; single numbers 10 cents. This monthly is devoted to physical, mental and moral culure.

Send for copies of each and select for yourselves and you will be satisfied, no matter which one you take, that you must have chosen the best.

Next month we will notice several of our favorite agricultural exchanges. Indeed, they are all favorites with us.

Some Hints about Raisin Making.

A correspondent of the Agricultural Department at Washington, writing from Malaga, gives some very valuable hints in reference to raisin making which we lay before our readers at this time for their instruction. According to this writer, the Muscatal grape is the one from which, as he styles them, "universally known Malaga raisins" are made. We give only extracts from the correspondent which relate particularly to drying and packing raisins :

In the neighborhood of Malaga and its "veyer," or valley, there are some very fine vineyards which produce large quantities of fruit; but in the opinion of the writer it will bear no compartson with the carefully grown fruit in the soil from the mountain-side, as first described by him; as in the rich, alluvial soil of the valley the grape fills out too readily, making juice instead of flesh, which latter is the indispensable requisite for fine packing raisins.

The difference is readily perceptible after they have been packed for a few months. Those of the valley shrink up with a sharp edge and acute wrinkle, becoming very hard; whereas the mountain-grown retain their fleshy fullness and soft plastic nature. The former, when first packed, have a bluish, velvety hue, whereas those from the hilly land assume a clarety, transparent color.

The process of drying this grape is naturally a very simple one, but at the same time, there are so many little circumstances attending it which so materially affect the subsequent operation of packing, that the subject is worthy of some consideration.

In picking the bunches of grapes, scissors should be used, so that in this operation the fine ones should not suffer any rough treatment or handling, as above everything the beautiful bloom of nature should be preserved intact.

The gatherer should, on the spot, sort out superior fruit, and from the vineyard convey it in flat baskets, of about two feet diameter and holding about forty pounds of grapes in a single layer, (as they must never press upon each other) on his head, to the drying floors, where he must lay the bunches most carefully close up against each other, so as completely to hide the ground, especially taking care to place them with their finest, handsomest and most perfect sides downward and next to the ground. The object of this is to preserve the beauty and bloom, so that they may subsequently adorn the face of the packed layers. The drying floors require nothing but the natural earth on which the grapes have been grown, except that they must be neatly and nicely laid, and be kept free from dust.

The practice has always been to shelter the flats with boards or canvas tents at night or when it threatens rain. It is not a good plan, however, to cover the grapes the first two nights after they are laid down, for it is found to be a good thing to let them enjoy the dew and freshness of the night, which counteract, in some degree, the tendency to dry too rapidly. The writer, however, has introduced into his establishment covers made of galvanized corrugated iron, which, although more expensive, he finds incomparably superior to those hitherto used. They are placed more rapidly, more completely, do not suffer through the sun as do the planks and canvas; and above all other considerations, instead of absorbing the damp, which in a slight degree is drawn out of the ground, they rather retain it on the flat, thus keeping the stalks of the raisins tough and pliable, whereby the packers are enabled to arrange and lay their layers without such a large amount of fine fruit being snapped off and condemned to the loose-raisin class.

The time required for raisin-drying varies according to the season, the aspect of the flats and many other causes, but I should say the average consumed may be computed at fifteen days; and one of the most important things attending the process is the selection of the proper moment for picking them up off the flats and packing or storing them.

One of the latest discoveries in Pompeii is a small woolen manufactory, situated very near the house where the fresco representing Orpheus was recently discovered. Several charred fragments of tapestry were found in this place, besides various machines for carding and weaving wool.

Industrial Expositions are of modern birth. They are now taking a front rank among the things which stimulate industry and help humanity. Their purpose is to encourage and glorify labor by displaying the grand aggregate of its trimmphs.

☞ The National Gold Medal was awarded to Bradley & Bulloson for the best photographs in the United States, and the Vienna medal for the best in the world.
429 Mantgomery street, San Francisco.

☞ Did you ever see how confectionary is manufactured. We lately dropped into the California Candy Factory, near the Opera House, and became convinced that Mr. Schroder understands the science of sweet things. He is always ready to entertain visitors, and what he does not make in his line it would be hard to find anywhere.

☞ Mr. F. Klien, who keeps the store and tin shop near the Post Office, San Jose, is a business man after the old times pattern. He is always hard at work when not waiting upon customers, of which he has not a few. His prices for goods are low, and we are glad to note that he is prospering as he deserves.

We regret that a letter from our representative at the State Fair came to hand too late for this month. But as it contains matters of much interest, we will give in connection with our notes of the Santa Clara Valley Fair next month.

☞ Tremendous rivalry in the jewelry business. Now is your time to get bargains. See Honriet & Co's radical announcement.

☞ That good suit of gray that the editor has been wearing every day for the last seven months was purchased at O'Banion and Kent's San Jose clothing store, opposite the Auzerais, for only $22. If any one can find a better bargain than that anywhere else he would like to know it. The suit is apparently not more than half worn out yet. O'Banion & Kent do business on the square, one-price system, and sell good clothing at the very lowest prices. Small profits and honorable dealing is their motto all the time. He speaks this "good word" without solicitation.

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NEW SORTS, BY MAIL.

Plants of the newest and finest improved sorts, carefully packed and prepaid by mail. My collection of Strawberries took the first premium for the best Collection at the great show of the Mass. Horticultural Society, in Boston, this season. I grow nearly 100 varieties, the most complete collection in the Country, including all the new large American and imported kinds. Priced descriptive Catalogue, gratis, by mail. Also Bulbs, Fruit Trees, Roses, Evergreens. 25 packets Flower or Garden Seeds, $1.00 by mail.

C. C. The True Cape Cod Cranberry, best sort for Upland, Lowland or Garden, by mail, prepaid. $1 per 100, $5 per 1,000. Wholesale Catalogue to the Trade. Agents Wanted.

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I. O. G. T.—GRANGER LODGE, No. 295, meets every MONDAY evening, at 8 o'clock, in their Hall, No. 284 Santa Clara street, over the S. J. Savings Bank. Members of sister Lodges and sojourning members in good standing are invited to attend.

JOHN B. STEVENS, W. Sec'y.

Every Intelligent Farmer knows that neither boys nor hired men are always to be relied upon, in his absence from home, for watering stock.

Every Stock Raiser will admit that a constant supply of water keeps his stock in an easy and contented condition, and they will consequently fatten faster. By the use of the ECLIPSE SELF-GOVERNING WIND-MILLS water can be abundantly furnished at any desired place.

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Having over 3,000 mills in successful operation, a purchaser knows just what he is buying.

Should you desire a windmill for any purpose, or pumps, address *Charles P. Hoag*, 118 *Beale St. San Francisco, Cal.*, for descriptive circulars.

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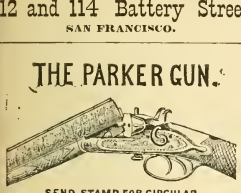

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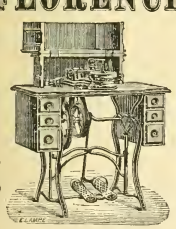

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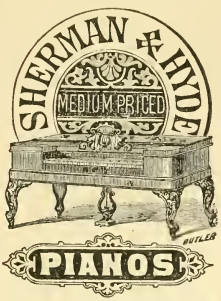

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Volume 6. CALIFORNIA Number 11.

NOVEMBER.

AGRICULTURIST AND LIVE STOCK JOURNAL

Subscription Price, $1.50 a year. | SAN JOSE, CAL., NOVEMBER, 1875. | Single Copies, 15 cents.

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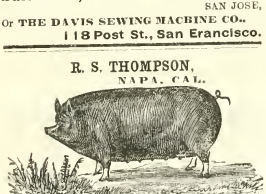

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The California Agriculturist
AND
LIVE STOCK JOURNAL.

Vol. 6. San Jose, Cal., November, 1875. No. 11

FAIR NOTES.

We did intend writing up very complete notes of the exhibition of industrial interests of the annual Santa Clara Valley Agricultural Society's Fair this season, but owing to the lateness of getting out the November issue, we will only call attention to the most striking features, and note the steady advance of improvements. There was much more interest felt in the exhibition of fine stock than ever before, both by exhibitors and the masses of the people. Although the horse-racing was set up as the great feature, there was a good display of useful horses, and they attracted attention. No better cattle exhibit was ever held in this State. A parade of these called out a large attendance of people.

The exhibit of swine was the best we have seen, although Mr. R. S. Thompson and Mr. Mills, neither of them, showed their fine Berkshires. Poultry attracted a good deal of attention, also. In fact, people are awake to the value of good breeds of all kinds of live stock.

Manufacturers stepped to the front with some of the best implements ever before seen on this Coast. The Straw-Burner thresher was there, several improved gang plows put on trial, and much interest shown in agricultural machinery and implements.

The wagon and carriage makers of San Jose did much credit to themselves and to the town by their large and handsome show of excellent work. No person needs to import work when such can be obtained at home.

The furniture shown from our home manufactory was of a very superior quality. The woolen goods were unrivalled by those made anywhere. The gloves made by Wilcox & Williams were as fine as any one ever saw, and as good, too. The Angora Glove and Robe Company exhibited goods that attracted much curiosity and elicited much praise. This company is doing more to develop the Angora goat business and make it at once remunerative and popular than has ever before been done in Europe or America.

Our nurserymen did much to show what fine plants they are now producing. Many species of tropical plants that are proving to be hardy in our climate were shown. Particularly of the palm family there were many varieties. Rock, Sanderson and Fox were the principal exhibitors in this line. O'Donnell confined his show this season to a display of curiosities from his Public Garden. The showing of fruits, though not so large as sometimes, contained all the most choice varieties. In fact, our growers have now got the fruit business so reduced to a certainty, that a few varieties—the best—are all that they care to cultivate for the market.

In the fine arts we find that there is considerable talent in San Jose. Mr. Brewer's plaster statue of S. A. Bishop, our "common sense" and "age of reason" horse-railroad man, was life-like and exhibited a good deal of ability, both of artist and subject. Coombs showed some superior sculpture work. Miss Lotz deserves more than a mere mention for her painting. As a painter of animals, she is bound to gain fame if she perseveres, and no mistake. There were many other very notable improvements and worthy exhibitions which deserve praise. One thing is sure, there is no locality in the State of California that can show so many fine animals and so varied an array of productions of utility and artistic merit, as can Santa Clara county. The State Fair this year, so say good judges, fell short of ours in point of worthy exhibitions. All that our local Agricultural Society needs is to reform some of the horse-race gambling features and prohibit liquor selling on the grounds, to make our fairs worthy of the name indeed. There is enough of industrial worth here to draw everybody to see, if the products were all on exhibition.

Let our premiums reward the producers, instead of entertaining a lot of black-legs, and we will succeed in more directions than one. The fairs can be so economically conducted as to pay expenses without gambling, and so conducted in the best interests of the whole people as to pay largely in doing good, at the same time that they afford pleasure to all.

SOMETHING FROM NEVADA.

Mr. I. T. Wood, of Carson City, Nevada, in a letter containing two new subscribtions says: It is a great pleasure to recommend the CALIFORNIA AGRICULTURIST, it gives such good satisfaction. It is destined to have a large circulation in the State of Nevada. Every new subscriber here says that is is just the paper that they need.

Our correspondent also adds the following intelligence: The last few years have established the fact that we are at the head as an apple-growing State. Nevada apples command one cent more a pound than California apples, and will keep two months longer than some varieties of California apples. Ours are finer grained texture, are crisper and of superior flavor. Nevada is not surpassed in the production of hardy fruits, and many thousand fruit trees will be planted this season in our State. Nevada is something more than a mining State.

[We have long known this, and advocated it too. We spent two years in Nevada some nine years ago, and carried a lot of trees there and helped plant an orchard on Tolle's ranch, near Reno. Also took twenty-four hives of bees into Nevada. We found it up-hill work to introduce fruit trees or bees there, as but few persons would have any faith that they would amount to anything. But we saw fine fruit grow there, and took as high as seventy-five pounds of good honey from a hive of bees in a single season, besides leaving enough for the bees. The sage brush and other wild plants furnish fine pasturage for the bees, as well as live-stock generally; and the sage brush soil, where it can be irrigated, is generally very productive of vegetables, hay or grain. Alfalfa, of which there was not probably fifty acres in cultivation in Nevada, when we were there, is now one of their most valuable crops.—Indeed it is something more than a mining State. It is fast being developed into one of the finest agricultural districts on this unsurpassed Pacific slope.]

An Apology is what any publisher of a periodical dislikes very much to make, and, also, what readers don't care to be bothered with. They would rather see every thing running smoothly and to their satisfaction without it and so would we. But we believe that the relation between publisher and patron should be such that perfect frankness and confidence can at all time be maintained between them. It is *your paper* as much as it is ours. Ours to produce, yours to appropriate. There is no middle man in the arrangement excepting the postmaster. But this is not apologizing. What we wish to say is that we owe our readers some explanation for being so late this month. It was owing to a conflicting copartnership that had to be settled before proceeding. It is settled now, and we move on with increased assurance of giving satisfaction to our readers and of making a general success of the enterprise. The AGRICULTURIST will keep right on in the path of progress and our readers may rest assured that it will not only prove itself worthy of their patronage, but will induce them to take a deeper interest in its advancement. Let every friend feel a personal interst in this matser for all the good that can be accomplished.

List of New Advertisements.

Furniture—Bennett & Co., San Jose.
Books and Stationery—E. H. Guppy, "
Goodenough Horseshoes—T. H. Larcom, "
Angora Glove and Robe Company, "
Hardware—Henry B. Alvord, "
Nursery—John Rock, "
Seedsman and Florist—T. W. Mitchell, "
Plows—Chris. Bergstrom, "
Nursery—Hanna Bros., "
Real Estate—Rucker & Brown, "
Physician—Dr. J. Bradford Cox, "
Seeds—B. F. Wellington, San Francisco.
Windmills and Pumps—C. P. Hoag "
Farms for Sale—G. Guerinot, Los Gatos.
Railway—Chicago & Northwestern.
Dentist—Arthur Gore, Santa Cruz.

California AGRICULTURIST AND Live Stock Journal.

CAL. AGRICULTURIST PUBLISHING CO.,
S. HARRIS HERRING, Editor

OFFICE: Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

SPECIAL TERMS TO AGENTS.

RATES OF ADVERTISING.

Per one Column	$15 00	Per Month
" half Column	8 00	" "
" fourth Column	4 00	" "
" eighth Column	2 00	" "
" sixteenth Column	1 00	" "

☞ We are determined to adhere to to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, render this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

Best Fruits to Cultivate.—Next month we shall give our readers a list of best kinds and varieties of fruits for a family orchard, also best varieties for shipping East, and for drying etc. Our reliable orchardists and most experienced fruit-growers will be consulted in this matter for authority.

What's in a Name?—There is a Santa Clara valley, also a San Jose valley in Southern California. We don't charge them with stealing the livery of heaven to serve, etc., but with all their boasting they cannot excel in points of soil, climate and civilization—the places by the same names in Santa Clara county. They can borrow our name but not our fame.

The People generally demand cheaper postage, not only on transient newspapers, but on all other third-class matter. The Post Office will gain, not lose by a cheaper postage. Express monopolies are the only parties benefited by dear postage—they not only want to run a legitimate business, but to run the Government in favor of extortion. Cheaper postage is the people's demand.

The Russian Grain Harvest is authoratively reported as very short this season. Great Britain will need about the usual amount as last year, as near as we can approximate, and will call on California for all she can spare, at remunerative prices. Although our prospects for next year's crop is now good; yet we feel safe in predicting a rise in the price for the present crop on hand, and think it safe to hold for an advance on present prices.

Our Readers will Notice that our lady correspondents and grandfather have promised an unusual feast of good things for indoors this month. It has been said with more truth than flattery that the CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL is the best household journal on this coast. We mean that it shall be at any rate, for as we have often said before the best part of any well conducted farm is, or should be, indoors, and the credit belongs to the wives, mothers and daughters who conduct the household department.

Peas, as a farm crop where there is stock, particularly hogs, are found to be quite profitable. Sown with barley or oats, they will ripen about the same time, and will stand up better for the scythe. When cut green for feed, hogs, horses and cows will eat them ravenously. They make good pasturage, also. Sown now, they will be fit for table green very early. Peas are as easily grown as wheat or barley, but do best in rich, deep soil. Sow some, if only on trial.

Prepare your Ground for an orchard by plowing it thoroughly as deep as you like. We believe in deep plowing of ground where an orchard is to be set. After the trees are three or four years planted, thorough shallow cultivation is all that is required. Drag the soil down as nearly plane as possible. Work it well. Mark off the land, sticking a stake in exact line of rows in every place where you are to plant a tree. This preliminary work is necessary to good, even planting, and it is always best to make a job look well. Next month we will give more information, with list of best varieties for an orchard.

For a Vegetable Garden it is well to spread manure on the surface heavily and harrow it finely at this season. After the weeds have made a good start, turn them under with a plow, harrowing well again. At the end of a week or two plow again and harrow. Another plowing in January, just before planting beets, carrots, turnips, onions etc., will be well and destroy more weeds. Remember that, with the soil well saturated as it now is, you can easily make a good garden for home use, even on dry upland. Sow cabbage and cauliflower seed for plants right away, in a bed away from chickens and where it can be sheltered from frost.

Plant out Shade and ornamental trees until every public highway and avenue is lined with them. Remember that the Code enjoins upon County Supervisors to promote the planting of trees, and as inducements on the part of owners of land entitles them to a premium of one dollar for every tree set out, when it shall have attained the age of four years. By co-operating together for the purpose, every neighborhood and township could be beautified and made more valuable by the planting of trees in front of every farm. The one dollar per tree will pay the expense of planting and caring for the trees. Every grange and farmers' club should canvas this matter earnestly, to its practical consummation.

Our Readers will probably take more interest in an announcement to the effect that the CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL is soon to be vastly improved in its appearance. We are employing the best ability on this coast in designing and engraving a new head for our monthly, and have other first-class improvements under way, so that we expect to present to our readers in January a periodical that for real merits cannot be surpassed in America for the money. We shall also start in January with 1,000 larger circulation than a year ago. We want to double the circulation this year and shall do so if possible with the assistance of our present subscribers. We are arranging to offer splendid inducements to old and new subscribers to work for the CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL, which every reader, old and young, rich and poor, will be pleased to entertain.

Palace Hotel Squashes and stump-the-world beets have become so common in California that it is hardly thought worth while to take the trouble to exhibit them in our agricultural fairs. Now has turned up an enormous turnip from San Luis Obispo county, one of the small English variety. Our old friend, Mr. J. F. Halloway, who has just bought a farm adjoining the one on which this candidate for vegetable honors grew, came packing it into our office lately, and showed us that this turnip measured two feet four inches in circumference and weighed eight pounds. This turnip was finely formed and proportioned. It grew on mesa or upland, without irrigation. Mr. Holloway has been traveling for some time to find a locality and piece of land to suit him for a home and he thinks he has found the spot at last. Where such turnips grow is a good place to vegetate.

Gradually reforms are working in civil law and there is need enough for them too. The Grangers' Fee Bill, a bill that the Patrons of Husbandry are about to introduce before the Legislature of this State, is a move in the right direction and should become a law. It is for the purpose of limiting the amount chargeable in cases where no special contract is made, as to fees. We understand this is to apply to lawyers and other professional services. Lawyers in particular have before their courts, among themselves, almost or quite unlimited power to make and exact most exorbitant bills for services rendered. They are mutually interested to make their services as valuable as possible to *themselves*. We know how it is, and hope to see this ring broken. And we would like to see the pay for all professional services predicated upon actual values of first-class labor in productive and mechanical pursuits. If this is drawing the line too close to suit them, let them take the benefit by going to work and realizing the pay for labor. As to qualifications, it takes just as long and requires just as much application of mind and muscle to become a first-class mechanic or farmer, as it does to reach the higher rounds in any other calling, and we believe that true justice should more nearly equalize the pay for all intelligent services.

Poetry.

I FORCIVE.

BY ISAAC KINLEY.

O H, never were words so fondly meet
By tongue of mortal spoken;
Oh, ne'er was uttered thought so sweet
As that dear, holy token—
I forgive.

I speak the soothing, sacred word;
It hath no tone of sorrow.
There's joy wherec'er its sound is heard,
It brings no sting to-morrow.
I forgive,

Yet I've had wrongs, and madly deep
My spirit hath been stirred;
But passion soothed itself to sleep
When in my heart was heard,
"I forgive."

Forgive each word, forgive each deed,
If aught of wrong is done then,
For soon thy aching heart will bleed
If vengeful thoughts have won thee.
I forgive.

Each angered thought we must control,
The fires of passion smother,
No malice cherish in the soul,
No evil for a brother.
I forgive.

Forgive, forgive! 'tis God's command—
Forgive and be forgiven;
Forgive and take the proffered hand
That leads thee on to heaven-
I forgive.

San Jose Institute, Nov., 1875.

The Farmer King.

The farmer sat in his old arm-chair,
Rosy and fair,
Contented there,
"Kate, I declare,"
He said to his wife who was knitting near,
"We need not fear
The hard times here,
Though the leaf of life is yellow and sere,

"I'm the king and you are the queen
Of this fair scene,
These fields of green
And gold between.
These cattle grazing upon the hill,
Taking their fill,
And sheep so still,
Like many held by a single will;

"These barnyard fowls are our subjects all;
They heed the call,
And like a squall,
On fast wings fall,
Whenever we scatter for them the grain;
'Tis not in vain
We live and reign,
In this our happy and calm domain.

"And whether the day be dim or fine,
In rain and shine,
These lands of mine,
And fields of thine,
In cloudy shade and in sunny glow,
Will overflow
With crops that grow,
When gold is high and when it's low.

"Unvexed with shifting of stocks and shares,
And bulls and bears,
Stripes and cares,
And the affairs
Of speculation in mart and street;
In this retreat
Sweet peace can meet
With plenty on her rural beat."

The Independent Farmer.

BY HENRY W. HERBERT.

How pleasant it seems to live on a farm,
Where Nature's so gaudily dressed,
And sit 'neath the shade of the old locust tree,
As the sun is just sinking to rest;
But not half so pleasant to hoe in the field,
Where the witch-grass is six inches high,
With the hot scorching sun pouring down on your back—
Seems each moment as though he would die!

'Tis pleasant to sit in the cool porch door,
While you smoke, half-reclined at your ease,
Looking out o'er your beautiful field of grass
As it sways to and fro in the breeze;
But not quite so pleasant to start with your scythe,
Ere the morning sun smiles o'er the land,
And work till your clothes are completely wet through
And blisters cover your hands.

In keeping a dairy there's surely delight;
And it speaks of contentment and plenty,
To see a large stable well filled with choice cows,
Say numbering fifteen to twenty;
And yet it seems hard when you've worked from the dawn
Till the sun disappears from your sight,
To think of the cows you have yet got to milk
Before you retire for the night.

But the task fairly over you cheer up once more,
And joyfully seek your repose,
To dream of the cream-pots with luxury filled,
And milk-pans in numberless rows;
But the sweet dream is broken when early next day
You're politely requested to churn,
And for three weary hours, with strength ebbing fast,
The victim despondingly turns!

But in raising your pigs there is truly a charm,
When they sell at the present high price;
And of all the young stocks which a farmer can raise,
There's nothing that looks half so nice.
How cheerful one feels when he leaves them at night,
The encouraging number of eleven!
But his joy slightly wanes when he goes out next day,
And of five ones can count only seven!

But no one disputes that the farmer is blessed
With true independence and labor,
Whose food don't depend on the whims of mankind,
Like that of his mercantile neighbor.
For God in His mercy looks down from above
And patiently gives him his bread,
Provided he works eighteen hours every day,
And devotes only six to his bed.

Waiting for Luck.

Ho! ye who are listless and moping,
Sit dismally twirling your thumbs,
And gloomily waiting and watching
For something that thus never comes;
You might just as well, foolish mortals,
Expect you'll by lightning be struck;
One will happen as soon as the other.
Don't stand around waiting for luck.

There's a saying—a good and a true one—
(Take courage, you poor one who delves
With a stout heart so bravely) that "Heaven
Will help those who first help themselves."
And you'll find, if you wish for good fortune,
A pretty good way is to tuck
Up your shirt-sleeves and start out and find it;
Don't sit around waiting for luck.

You may pine and mope on forever—
Find fault and deplore your hard fate—
But you'd better remember the proverb,
And act on it ere it's too late.
You may pout and grumble forever;
Just so long you'll find you are stuck
In mire of sloth and amusement.
Don't sit around waiting for luck.

There is wealth to be had—go and seek it;
And with it get honor and fame.
By the sweat of your brow you can gain them,
And carve for yourself a proud name.
But to do this take tact and ambition,
Persistency, hope and some pluck.
Are you ready? then lose not a moment!
Don't sit around waiting for luck!

Autumnal.

BY J. G. WHITTIER.

The Summer warmth has left the sky,
The Summer songs have died away,
And withered in the footpaths lie
The fallen leaves, but yesterday
With ruby and with topaz gay.

The grass is growing on the hill;
No pale, belated flowers recall
The astral fringes of the rills;
And sharply the dead vines fall,
Frost-blackened from the roadside wall.

Yet, through the gray and somber wood,
Against the dusk of fir and pine,
Last of their floral sisterhood,
The hazel's yellow blossoms shine—
The kindly gold of Afric's mine.

Small beauty hath my unsung flower
For Spring to own or Summer hail;
But in the season's saddest hours,
To skies that weep and winds that wail
Its glad surprises never fail.

O, days grown cold! O, life grown old!
No rose of June may bloom again;
But like the hazel's twisted gold,
Through early frost and latter rain
Shall hints of Summer time remain.

And, as within the hazel's bough,
A gift of mystic virtue dwells,
That points to golden ores below,
And in dry, desert places tells
Where flow unseen the cool, sweet wells—

So, in the wise diviner's hand,
Be mine the hazel's grateful part,
To feel, beneath a thirsty land,
The living waters thrill and start,
The beating of the rivulet's heart,

Sufficeth me the gift to light
With latest bloom the dark, cold days;
To call some hidden spring to sight,
That in these dry and dusty ways
Shall sing its pleasant song of praise.

O, Love! the hazel-wand may fail,
But thou canst lend the surer spell,
That, passing over Baca's vale,
Repeats the old-time miracle,
And makes the desert land a well.

The Autumn of the World.

The last wan petals leave the rose,
The latest swallows plume for flight,
The Summer's gone where no one knows,
With dead men's love and spent years' light,
And warm hearts buried out of sight.

Red roses are the crown of youth;
The warm light strikes on lover's lips.
Laugh, then, and fondle, happy mouth;
And yet remember, sweet time slips—
Death hurries on with full eclipse.

So short, so sad! O, let not Death
Find only faded flowers and wine,
When, hungry for the joyous breath
That dreams not of the year's decline,
He lays his cold, white mouth to thine.

Cling to the flying hours; and yet
Let one pure hope, one great desire,
Like song on dying lips be set,
That, ere we fall in scattered fire,
Our hopes may lift the world's heart higher.

Here in the Autumn month of Time,
Before the great New Year can break,
Some little way our feet should climb,
Some little mark our words should make,
For liberty's and manhood's sake.

Clear brain and sympathetic heart,
A spirit on flame with love for man.
Hand swift to labor, slow to part—
If any good since time began
The soul can fashion, such souls can.

And so when we are dead and past,
The undying world will some day reach
Its glorious hour of dawn at last,
And across Time's sunken beach
May smile, one moment, each to each.

Autumn's Last Rosary.

BY THOMAS HOOD.

The squirrel gloats over his accomplished hoard,
The ants have brimmed their garners with ripe grain,
And honey-bees have stored
The sweets of Summer in their luscious cells.
The swallows all have winged across the main;
But here the Autumn melancholy dwells
And sighs her tuneful spells
Amongst the sunless shadows of the plain.
Alone, alone,
Upon a mossy stone
She sits and reckons up the dead and gone,
With the last leaves for a love-rosary,
While all the withered world looks drearily,
Like a dim picture of the drowned past
In the hushed mind's mysterious far-away,
Doubtful what ghostly thing will teel the last
Into that distance, gray upon the gray.

The First Breath of Autumn.

I heard a voice of Autumn in the trees
Calling for me, who in far Summer lands
Dwelt and made merry. In the fragrant ease
Of the unpeopled uplands, on the sands
Of Proteus' home, I had cast off the bands
Which bound me to my fellows and their cares,
Living, as 'twere, in Eden unawares,
Entranced by music of the salty strands;
The morning birds there cheated morning air
To linger till the silent breast of noon
Laid her rich warmth upon the dear earth's heart,
And lingered there in turn, till sunset soon
Grown angry, called her swiftly to depart;
Thus loitering, heard I Autumn cry, "Prepare."
—[Harper's Magazine for October.

Bordered with trees whose gay leaves fly
On every breath that sweeps the sky
The fresh, dark acres furrowed lie,
And ask the sower's hand.
Loose the tired steed and let him go
To pasture where the gentiass blow:
And we, who till the grateful ground,
Fling we the golden shower around.
Fling wide the generous grain. We fling
O'er the dark mold the green of Spring,

ANOTHER RAILROAD SCHEME ON FOOT.

The Government, i. e. the people is to be asked to endorse another little beneficial enterprise. The enormous monopoly established by Government grants of money and lands—(on the second mortgage plan, which an inside ring adroitly worked up,) the great overland route now in existence has, become burdensome and oppressive, and the people are asked to apply an allopathic dose of *counter irritation*, by building a rival road. Another blister in the form of Government obligations is asked for, not to enrich anybody this time. Oh, no, of course not. It is all on the square for the advantage of the poor, honest people. And don't the people need a little help? to be sure after all they have suffered and are suffering. We do not care to argue this question. We are too much disgusted with the big steal business to ever consent to see the Government made a responsible party to any more schemes to enrich corporations or individuals in any such way. When the Government condemns all private and incorporate railroad titles and itself becomes owner of them all, and runs them in the economical interests of the people, it will be soon enough to talk about building another road. Until such time let corporations calculate such business on its own merits and if it cannot rest on that, let it go till such time as it can. The New York daily *Bulletin* contains an article on this subject from which we extract the following facts:

What is styled a "National Railroad Convention" is announced to meet in St, Louis this month, to which members of Boards of Trade and political bodies, as well as railroad officers, are invited. Though no programme is given out, it requires only ordinary discernment to see that the principal, if not the only subject of deliberation, will be an effort to commit that body to supporting Tom Scott's Texas and Pacific Railroad subsidy scheme, with Atlantic and Pacific connection by way of St. Louis engrafted on it, which, it is understood, is to be pressed upon Congressional attention again this winter. Its promoters affect to believe that this measure has better chance of Congressional favor now than then, owing partly to the presence of a Democratic majority in the lower house, many of them new men, and to an increased pressure upon them from outside bodies, and to certain amendments in the bill itself, designed to reconcile the conflicting interests and claims of the Southwestern cities. The proposition, as we understand it, does not ask for a direct issue of Govenment bonds—as that would run counter to the public sense of propriety and to an act of Congress expressly prohibiting an increase of the public debt—but calls for the Government guaranty or endorsement of the Company bonds to an amount averaging $40,000 per mile for the 1,450 miles between Fort Worth and San Diego, and for 500 to 1,500 miles more for branches leading to St. Louis, Cairo, Memphis, Vicksburg, New Orleans, Galveston and Indianola. In other words, it seeks to commit the public to an annual interest liability, as endorser, for railroad construction purposes on something like $70,000,000 of paper obligation for a series of years—probably until the roads are able to earn the amount, viz: $3,500,000 per annum, in gold. It is true, that, as drawn, the bill does not call for an abstraction of this amount semi-annually out of the Treasury, but the amount of bonds per mile is made enough at the outset to permit a portion of them being withheld, and from the sales of the same, as the interest on the remainder accrues, it is to be paid, In plain language, it is designed to borrow under this public guarantee, in addition to its cost, to pay the interest on its cost for a series years, longer or shorter, as the case may be. This bill is ingeniously drawn to avoid the numerous objections which will rise up all over the country to any policy of using public money for the furtherance of private ends. That it does, nevertheless, take from the Government something of great value must be the fact, or otherwise such tremendous exertions would not be made to secure its adoption.

IRRIGATION.

This most vital of all subjects to the material prosperity of California, is just now, as it should be, occupying the earnest consideration of some of the first minds in the State. They could not be better employed. Without water, many sections of our State, are, to all intents and purposes, deserts. Not that they are barren, sandy wastes, like the Saharas of Africa. By no means; for when supplied with water, either from the clouds or through irrigating ditches, they are found to be the most productive soils in the world. Water, then, is the great *desideratum*, and water must be had.

It is our humble opinion, that the State, through her Legislature, should inaugurate a general system of irrigation. One of the very first steps in this direction should be an Act to condemn any and all waters in the State suitable to the purpose. The next, the appointment of a Board, whose duties should be to take possession of all such streams, and utilize them, through proper ditches, for the irrigation of all lands to which they could be applied. Of course these ditches could not be constructed all at once. The system would be one which, commenced now, would reach on down to future generations. It would cost millions of dollars, and could be carried out only in accordance with the financial ability of the State treasury. A reasonable tax should be levied on those farmers who should use the water, to cover interest on the capital expended, make repairs, and in course of time reimburse the treasury for the original outlay. In all other countries, Italy, Lombardy, Spain and Mexico, where irrigation has been used to a large extent, the system has been a governmental measure. The ditches have been constructed by the government, and laws passed to regulate the distribution of the water. These systems have been successes, and we therefore advocate them here. If left to private incorporations, we believe it will be the fruitful source of litigation, confusion and the usual amount of extortion and dissatisfaction that attend all such undertakings.

Certainly some measure can be adopted that will not embarrass the finances of the State, backed up by the increased productiveness and wealth of the soil irrigated. The results would be equally beneficial to all industrial interests, if correctly planned and executed. As it now is, the people's hands are tied in this matter. Farmers cannot and dare not take out water on their own account in many instances, and co-operation among individuals where interests are conflicting or litigation is possible, is unsatisfactory, and distrust very often forbids communities attempting much in this matter. The State could and should control all waters and irrigation for the general good.

RETRACTION.

Mr. J. P. Ross, of Lompoc, writes to us that he seriously regrets the publication of his private letter, wherein he spoke of Mrs. Swantons death and of her husband's abuse, etc. He says now that his informant exaggerated a mere rumor without foundation in fact, and that he did not write from his own knowledge at all. He says he has investigated the matter for himself and desires to justify Mr. Swanton from the charges totally. This is not the first time that rumors have taken wings as real facts. We blame our old friend Ross for stating as facts what he had no proof of. Our only object in publishing the letter (see page 199, September No.) was to show the terrible demoralizing effect of intoxicating liquors when used immoderately, also to show the fearful results arising from such abuses. We also sympathized with the sufferers, and with the temperance movement against those who were instrumental in working such ruin. We had the confidence in our correspondent to believe his word without question. We hope this will be a lesson for all of us to be careful how we give attention to rumors, and, above all, how we spread as truths what we are not positive about. There is too much of this thing done. Something maliciously, often thoughtlessly and occasionally honestly. Whatever the object an injustice is oftener than otherwise done somebody. On general principles we are inclined to the opinion that there is much less evil in the world among people in respectable society than many apprehend. We know the Swanton family personally to be respectable and well-meaning people, and regret that any falsehood should have found its way into our journal, although it reflected not so much upon any one's honor, as upon the liquor traffic itself; for every one knows that it is often the pettied promising and ambitious ones who lose their self-control and become lost to highest feelings and duties through indulgence in alcoholic stimulants. It has been truly said that no poison other than alcohol will cause a man to abuse his best friends. While we regret that we published Ross' personal letter, we are rejoiced to learn authoritively that Mr. Swanton is innocent of the imputation the letter contained; as to his treatment of his wife—their separation, etc., and in justice to him and his family, we gladly retract all that the letter above referred to contained about Mr. Swanton.

SPONTANEOUS GENERATION.

It is still thought, by some persons, as we see by our exchanges, that oak trees springing up, after the destruction of a pine forest, on the same ground, is proof of so-called spontaneous generation of plants. We had an opportunity of examining this point personally, and gladly availed ourselves of it. A destructive fire occurred in a piece of forest not far from where we lived. It was only stopped by a heavy fall of rain. In the third or fourth year after the fire the whole face of the earth was covered with young oak trees, from one to three years old. Where did the young oaks come from? Did they grow from acorns? Undoubtedly they did. On examining the soil it was found full of acorns and acorn-shells. The fallen pine trees were also found full of acorns and empty acorn-shells. The red-headed woodpeckers had inserted thousands of them in holes which they had dug in the soft pine bark for their reception. In many cases only the shells were left. These were those on which the birds had lived during the past winters. But in other cases the bark had grown over the acorns and embedded them so deep that they were equally protected from the weather and the birds. When dug out they were found perfectly sound. Where the fallen trees were partially embedded in the soil, the acorns were found swelling and sprouting as far up as the moisture, air, heat and light could reach them. Limbs of the trees were found scattered everywhere in the same condition. Can any one doubt the true source of the oaks in these cases? And yet such phenomena have been erroneously instanced as proofs of spontaneous generation! It only requires a little observation and research to arrive at the truth in these cases. We apprehend that the same scrutiny will explode all other supposed cases of the same kind, notwithstanding Prof. Tyndall's aphorism that "matter contains within itself the power and potency of all life;" but robbed of its tautology, this simply means that matter under favorable circumstances produces acorns, and that acorns, under the same, produce oaks—all of which no one will deny.

ALDEN FACTORY RAISINS, ETC.

We promised to inform our readers as to the success of drying grapes into raisins at the Alden Factory in San Jose this season.

Mr. C. T. Settle, the worthy Superintendent, went to considerable expense to thoroughly inform himself how to proceed and in making preparations for a thorough trial and experiment. He fixed a lot of racks so that he could cure them slowly, and be several days about it if necessary. He frankly owns that he has not been as successful as he expected to be. The raisins he dried are not first-class in flavor or appearance, although some of them are very fair for cooking purposes. Mr. S. is satisfied, and so are we, that as good grapes for raisins cannot be produced in Santa Clara county as in the hotter interior valleys, where the season is longer for their growth and ripening, and the atmosphere is more drying than it is here. Our grapes are as beautiful as those grown anywhere, but are certainly not as rich in saccharine substance. They are juicy but tarter in flavor; and while they are superior shipping and table grapes, are not firstrate for curing into raisins. Mr. Settle thinks that sun-drying for raisins is best. One lot of valley muscat grapes, which cost 2 cents per pound, cost, for fruit and fuel, 7 4-5 cents per pound as raisins, without reckoning other expenses. Another lot of mountain grapes—muscats—at 2½ cents per pound, cost in raisins, for fruit and fuel, 8¼ cents per pound. He is satisfied that he could not place raisins cured by the Alden process upon the market for less than 11 or 12 cents, wholesale, at a profit. A grape, to make a good raisin, must be thoroughly ripened on the vine, and be rich in saccharine matter, as well as firm of pulp.

On other fruits and on vegetables the Alden factory is a grand success and a paying concern. Mr. Settle is now running on onions and potatoes, and they are as good as fresh when ready for market. Onions are raised plentifully in our valley, and are afforded by the farmers for 90 cents to $1.00 per hundred pounds at the factory. Ten pounds of onions will make one of dried, worth, by the case, 25 cents per pound net. Onions are difficult to dry, as they scorch easily. Mr. S. thinks of making a run on squashes soon. Dried squashes and sweet potatoes are splendid when made into a flour, for puddings and pies, and, in fact, a hundred different dishes, in combination with other ingredients or alone.

GRAPES FOR CHRISTMAS.

For several years past Mr. Dan Hadley of San Jose, who has a small vineyard in the South end of town has managed to put several tons of fine grapes into market about Christmas time. His method of doing this is extremely simple, and has proved to be remunerative. His vines are trained up high enough so that the bunches of grapes hang clear of the ground. And he does not pick the fruit until he is ready to market it. His system of preserving them is as follows: He takes common barley sacks, rips them open and after trimming the top twigs of the vine so as to allow the sack to be spread evenly over the grapes like a tent, he confines the sack in place by its corners, running branches of the vine like pins through the sack to hold it in place. This sack shelters the grapes from sun, from rain and from frost. Mr. Hadley has used the same sacks for five or six years for this purpose, and some of them are still good for service. During protracted, rainy, wet weather some of the grapes will rot a little, but the loss is generally trifling. The worst enemies to this enterprise are birds that pick into the grapes, causing some berries to rot, which in turn rot others. To prevent this he always leaves a sufficient quantity for the birds on open vines, and with few exceptions they prefer those which are exposed. One important thing in this connection he has observed, and that is, that honey-bees are his friends. They are fond of grapes, making honey out of the rich juice of the fruit, but they only work upon the pecked fruit, not being able to penetrate the skins of sound grapes. The great advantage in this is, that the bees will at once suck the pecked berries dry, so that they do not rot or cause rottenness. Mr. Hadley thinks these facts too valuable to longer keep to himself, and so generously advises us to publish them for the benefit of whom they may concern, which we gladly do.

THE SEASON.

Our first rain this season commenced Tuesday, October 26. The fall was slight in most places. Monday, November 1st there was quite a storm sprung up—enough rain to moisten the surface soil for plowing. It did not commence without warning; yet, some were caught unprepared as usual. We learn that many raisins were damaged. On Saturday, November 13th, after a succession of warm, bright and cloudy days, another warm rain commenced and continued at intervals for several days, saturating the soil finely, and shooting up the green grass and grain, that the first rains had sprouted beautifully. Never has a rainy season commenced here with brighter prospects for flourishing crops. No blighting frosts or winds, but the gentle breath of Spring, fanning the falling leaves and blessing the tender green that carpets the generous and grateful soil.

What is more lovely than our California Winters? Winters only in name; none of the saddening feelings that a sleeping earth bound in icy chains brings to the people who inhabit more rigorous climes. The falling leaves but shelter the springing plants that smile in rain and laugh in sunshine. Our poets need not sing "the saddest of the year," but can tune their harps to gleeful melody, for the ripeness of lucious fruits and the birth of new vegetable life is lavish amidst blooming roses and singing birds.

No wonder that the tide of immigration pours into our State when the cheering reports of friends go back. If our lands now held by thousands of acres by forbidding monopolists and grasping owners, were only so that homes could be secured for the masses, too much could not be said in praise of our blessed country.

The Stringency in the money market and the great fluctuation in stocks and money values are but the natural outgrowths of business conducted on a speculative basis. In all such cases some who acquire wealth without producing it will suffer, but as a general rule, the industrial interests are made to most keenly feel the burdens they have to bear. As nothing is produced without labor, so no non-productive enterprise or speculation can exist without tapping industry for support. Whatever it gives in exchange, be it money or promise to pay, cannot in the end lighten the burdens of labor. Speculation injures industry, while every industrial enterprise of a productive character helps every other. If everybody labored, everybody would be liberally supplied with needed comforts, and luxuries be multiplied, cheapened and within the reach of all. In a community where the majority are non-productive and manage to acquire wealth, as an inevitable result, those who work must suffer in a proportion equivalent to the wrongs committed. The blame does not rest wholly with individuals, but attaches to the artificial system of finance which allows money to be king.

Correspondence.

State Fair Notes.

THE following is the letter of our special correspondent, which reached us too late for our October issue:

The State Fair this year was unusually interesting in some departments, and as disgusting in other respects as can well be imagined. Horse-racing was the principal feature, as usual. It is astonishing how many people, and that of the class who claim to be respectable, are all absorbed in this legalized gambling game. It is a disgrace, not only to the Association upder whose auspices the Fair was held, but to the State. Our Legislature appropriates money ostensibly to encourage agriculture, and here it is squandered among the professional horse-jockeys, adding nothing to the industrial interests of the State in any way. We enact laws forbidding gambling, and then, in the same breath, offer a premium for the most demoralizing and wholesale forms of it. Men and women of all classes of society were engaged in it. Nothing else was spoken of in conversation. Betting and pool-selling was the only theme that seemed to be interesting, and so the city papers are full of it. I am proud of the fact that I am not expected to post the readers of the Agriculturist on the issues of this barbarous sport.

The show of California horses was much larger and finer than ever before. There were on exhibition some horses which showed rare qualities for higher usefulness than mere speed. There were, perhaps, some of the finest stallions in the country here. We have not time to notice all deserving of special mention, so will not attempt to particularize, but are glad to note progress in this particular.

In horned cattle the exhibit was truly good —better than at any previous Fair. Santa Clara county, especially, was well represented. In fact, were it not for our county the Fair would have been little but a horse-trotting show. Some of the cattle we may mention as deserving particular notice. The finest herd was that of Col. Younger, noted for its superior qualities. Charles Clark, of Milpitas, and S. B. Emerson, of Mountain View, exhibit some fine specimens from their Durham herds. Mr. Emerson's bull, "Sheriff," is a beauty. Cyrus Jones, of San Jose, showed only some of his young stock, California bred, but we notice that he walked off with first prizes and sweepstakes.

C. Comstock, of Sacramento, had on exhibition a lot of fine graded cattle. Mr. Bright, of Sacramento, had a herd of Ayrshires which he imported from Massachusetts two years ago, including the bull "Dunbar," four years old, a beautiful animal. Messrs. Powers & Stanton, Sacramento, imported 14 head of Ayrshire cattle last year, which they had on exhibition. Mr. Powers says that his two-year-olds will average one pound of butter a day, and mature cows have made as high as four pounds. Saxe Bros., San Francisco, had on exhibition a splendid bull and cow, hich had just arrived from Kentucky. The bull, "Gay Boy," was sired by "Joe Hooker," who took the sweepstakes in Ohio two years in succession. The cow "Fannie," sired by "Mazourka Lad," took three sweepstakes in Kentucky this year. This importation is a valuable addition to the fine stock of the Coast.

There was only one exhibit of swine. They were *called* Berkshire; but if Berkshires are spotted and have coarse bristles I never knew it before. They belong to M. Sprague.

Branton, of Dixon, had ten pens of fine merino sheep, large and well-covered with fine fleece. S. B. Emerson exhibited Cotswold sheep as fine as we have seen in the State.

The most interesting display in the stockyards was the show of Angora goats. C. P. Bailey, San Jose, had thirteen pure-breds and seven grades. His buck, "Prince of Pine Mountain," a large and most beautiful creature, and the ewe, "Queen of Monterey," were entered for the sweepstakes. The grades are the fourth cross. They have good form and fine, lustrous fleece. They are shown merely to prove that grades can have fleeces that will make mohair. Mr. B.'s stand was thronged with spectators to examine the specimens of cloth, and also robes, mats and gloves, from the Angora Glove and Robe Manufacturing Company of San Jose. The goat men say this establishmnnt will add greatly to the interest of their business. Mr. Bailey sold all the specimens he had long before the Fair was closed. Mr. Gilmore, President of the Angora Goat-Breeding Association, had on exhibition nineteen head of pure-breds. "Hannibal," who took the sweepstakes last year at the Bay District Fair, is a superior animal. The fleece is very fine and glossy. His favorite goat is the ewe, "Cleopatra," which he considers the best he has raised. Messrs. Landrum & Rogers had a meritorious display of 45 pure-bred goats. Chief among them "Hercules" and "Robert E. Lee," both perfect specimens. S. P. Thomas, Auburn, Placer county, had also a good exhibit of twenty head, including the imported buck, "H. W. Beecher." The display of goats was so good that it was no easy task for the judges to award the premiums. There was hardly a poor animal to be seen. The goat men and other patrons expressed themselves well pleased with the Agriculturist and Live Stock Journal.

The exhibit of agricultural machinery on the stock ground was not large. We saw nothing new except a self-dumping horse-rake, which was very simple in construction and seemed to do its work well. The Pavilion contained very little that would be interesting outside of this city and county. Some fine squashes, melons, potatoes, apples, ornamental plants and fancy work are the chief objects displayed. There was an apple on exhibition which was a wonder in itself. It was exhibited by Mr. Wilkins. It measured 25 inches in circumference, and weighed nine pounds, three ounces. The shape round and symmetrical, color a reddish green, called a Sheridan Pippin. Seeds of this apple were advertised for sale at $50 each by J. F. Upham, Sacramento. A Darwin could probably trace its ancestry back to its original melon vine.

Mr. Wm. Squires, an Oregon saw-mill owner, has asked the Centennial Commissioners if they would like to have him furnish for exhibition a fir plank twelve feet wide and 100 feet long, a spruce plank eight feet wide, cedar seven feet, larch seven feet and hemlock five feet, or even larger.

Subscribe for the Agriculturist. Now is a good time.

Letter From Yolo County.

[We owe an apology to our correspondent, Mr. A. R. Woodhams, and to our readers for the mixing up of the types of his letter from Woodland, when putting into the forms for the press. Although publishers are respnsible for everything wrong about a paper, the printer alone, who handled the type, takes the actual blame in this case, as the editor could not know of the mixing till the paper was printed, when it was too late to correct the fault.

As the communication contained valuable information, we reprint in a revised form, and this time, we trust, without serious blunders.]

Eds. Agriculturist and Live Stock Journal:—Woodland is a stirring town of about three thousand people, situated seventeen miles northwest of Sacramento, and on the line of railroad from the latter place to Knight's Landing, and is surrounded by some of the most productive land I have seen in the State; and if not for the heat and hot North winds, I should consider it the Farmer's Paradise. In this vicinity are large bodies of white oak trees, which no doubt gave the name to the town. Shade and ornamental trees do not thrive as at Santa Clara. Live oaks are a rarity.

In the town there are five or six churches, numerous saloons, one college, one fine public schoolhouse with an attendance of about 300 scholars, two newspapers, gas and water works, a grist mill and a large machine shop and planing mill.

ALFALFA.

In this vicinity there are between 2,000 and 3,000 acres of alfalfa, and although many farmers of this State *think* it a poor article for hay, the farmers here *know* by experience that it makes hay of an excellent quality when properly cured. I can hardly express to you the many advantages of these clover fields. Everything seems to thrive on alfalfa. Here are to be seen fat animals, clover-fed. Hogs are kept on it the year round, and a drove of 100 is a common sight. Many alfalfa clover fields this season have yielded five tons per acre, besides a large amount of pasturage; others, three or four tons, besides a crop of seed varying from 200 to 800 lbs. per acre. Alfalfa clover also gives the bee-keeper great advantages. I saw 50 lbs. of delicious honey made in three weeks taken from two hives. Thrashers are now at work on clover seed, but there are many fields that will make another crop of hay in a few weeks more. The beautiful green clover and the delightful fragrance from the blossoms has to be seen and enjoyed to be appreciated. The farmers of this section show an enterprise that might with advantage, be a copy to farmers in other portions of the State. To add to the natural productiveness of the soil, they make use of the waters of Cache Creek for

IRRIGATION.

The ditches are made on the highest land, and the method of watering is by flooding. The land is laid off into convenient levels by dikes several inches high.

If some of our dry land farmers could see the alfalfa clover fields and the vineyards

yielding a third crop they would be converts to winter irrigation at once. And just here I would most earnestly urge my Santa Clara neighbors and people of our beautiful valley to utilize the many streams of water that run to waste even in dry seasons. When that is done I predict a future for our own valley that few persons can conceive of.. As a sample of what water has done near Woodland on

A FARM OF 80 ACRES,

which a few years ago could have been bought for $600, and now owned by Mr. R. B. Blowers. $10,000 worth of products was sold in one season; expenses were $2,000. Another farm owned by N. Wyckoff seemed to be equally productive.

CORN.

Last week I saw on the farm of J. Fowler a fine sight of 70 acres of corn of different varieties, some of it planted the 25th of June and growing from five to eleven and one-half feet high. The soil, with proper cultivation, would produce 100 bushels per acre.

DAIRYING

Is not carried on as largely as it might be, but there is no reason why this county should not be the "Orange County" of the State. D. Farnham is one of the largest and best butter-makers here. He makes about 100 lbs. a week, and for color and flavor it cannot be excelled.

THE WHEAT CROP.

Has been good for this season. Summer-fallowing is in general favor here, lands so treated yielding from 30 to 40 bushels, when winter sown yields from 15 to 25. The gale of last Spring did serious damage to wheat, consequently many are looking for a variety that will ripen after the high winds cease. Proper wheat has been a favorite seed, but its ripening too early makes it objectionable. Club seems to be the choice of many for next season. Land here is worth from $20 to $200 an acre, according to location and improvements.

FARMING MACHINERY.

Farmers are using the best improved machinery. For thrashing, Enrights straw burners are being introduced. Here, also, derricks with horse forks are used with nearly all thrashing machines, also Jackson's self-feeder and elevator; a great labor saving machine. I have seen Jackson's Traction engine used for thrashing, propeled over a rough road and drawing separator, traps wagon, etc. Mr. N. Wyckoff has imported from the East (and I believe it's the only one in this State) a Detrick's Perpetual hay-press, driven by horse-power. It makes compact bales that I have not seen equaled. Ten tons of it can be stowed on a single railroad box-car.

POULTRY.

I have visited the poultry yards of Dr. J. W. Prather, and though his choicest birds were away to State Fair, I saw enough to satisfy me he has very choice poultry. His yards are located in clover, so his poultry have green feed the year round.

RAISINS.

Before closing this I must mention the farm and vineyard of R. B. Blowers. I saw sights there that would astonish even old Californians. Mr. B. has 25 acres devoted to table and raisin grapes, and if wine men would visit his vineyard and see his "lay out" of raisins, no other argument would be needed with such of them as desire prosperity and have the good or their race in view. For bearing, size and flavor of Mr. B's. grapes and raisins, it will be hard to equal them anywhere. I saw vines bearing a second crop that had on at least 40 lbs., ofgrapes! Mr. B. dries his grapes on the ground, but this year he is trying a cement floor in the field. He has 700 yards of this floor already, and so constructed that in case of a rain, water will drain off quickly. I also saw the effect of two methods of prunning of one kind of grape vine. One way caused the vine to be almost worthless as a bearer, the other made the same varfety very prolific. From 120 lbs., of grapes, Mr. B. has made 45 lbs. of raisins.

There again I saw clover fields and the effect it had on stock, especially in its wool and mutton producing qualities on some graded Merino sheep belonging to Mr. B., also some of the get of buck, "Silver Horn." A lot of Merinos imported from Vermont and owned by Mr. George Hammond were very fine. A lamb 7½ months old get of "Vigor" of Ohio weighed 107 lbs. On 10 acres of clover, Mr. B., has had for five months, 150 heads of sheep and 10 of cows and horses, and there will be feed enough for months yet. Mr. B., discovered that cattle and sheep that had access to his grape cuttings—of which they ate freely in the spring—did not bloat, showing, perhaps, that stock running on succulent *clover need dry feed* as well.

A. R. Woodhams.

"Hayseed not all Chaff."

Dear Editor Agriculturist and Live Stock Journal:—I think your article in October number on "Short Weight Cheats," taken from the *Pacific Grocer*, is liable to mislead a stranger to the average "Mr. Hayseed." Most of the butter retailed from the groceries is sold by the roll, the same as soap by the bar, or cream tartar by the paper. So long as this is the custom, "Mr. Hayseed" has the same right to its advantages as he has to the loss of the bar and paper custom or system. It is very proper that "one hand should wash the other." Most of the butter in market is moulded in moulds sold by the grocer to the butter-maker, and if the butter is light the grocer deducts when he buys, and then makes off of his customers when he sells.. "Mr. Hayseed," in this case, is not the swindler. I do not claim that two wrongs make a right, but that established custom is custom. "Mr. Hayseed" should be, as charged, entitled to his part of the benefit. In regard to "short cords of wood," it is impossible to take an honest cord as piled by the chopper, load it on a wagon, haul it from ten to twenty miles, throw it off and pile it up a full cord again. Every stick has shrunk in drying, the bark fragmeuts have rattled off, there is an unavoidable loss in *bulk* for some one to lose, if "lose" you can call it.

In regard to "clods and stones in the baled hay." With the best of intentions on the part of "Mr. Hayseed," it is impracticable to keep them all out. Hay is usually raked and bunched with a horse-rake, the rake gathering all the loose material on the ground. Many a heavy clod is never seen by the raker or stacker; and any one who has seen those fierce, sweaty athletes *baling by the ton*, pitching, rolling, and stamping the hay into the press, knows they have neither time nor inclination to put in or throw out clods; it would not pay them. Some of the last bales raked up round the press contain fine stuff but often *more* actual feed than the long straw bales.

I am writing of honest work only, and wishing to defend an honest "Hayseed" from unfavorable *appearances*. I would not defend any dishonest practice, on the part of either producer or middleman, and should not trouble you with these remarks now if it were not a notorious fact that Mr. Middleman is usually very *glib* in his own defence, and "Mr. Hayseed" is usually stronger in his *spinal column* than in his *tongue*.

Yours for fair play, C. A. W.

Tree Planting.

Now is the time and the season of the year or our farmers to engage in planting trees Our liberal Legislature has proposed to pay out of the State treasury one dollar for every tree planted and living four years after the work is done. This sum will reimburse the farmer for all his time, labor and expense in the undertaking, and he will have the trees clear at the end of the four years to beautify his farm, afford a welcome retreat from the hot Summer's sun to his cattle, and a cool and refreshing shade to the footsore and weary traveler. Besides, it has been demonstrated that when a country becomes treeless, it becomes dry and rainless. The earth becomes parched and the springs dry up; but when the whole face of the country is covered with forests, the rain that descends from the clouds remains in the soil, evaporation is checked and the springs bubble forth their bright and sparkling waters forever. Whole regions of the earth's surface have been rendered rainless by the destruction of their forests. There is no doubt but that the rainfall of Oregon will be materially lessened in the course of time by the great destruction which is now taking place in her immense forests. By a parity of reasoning, it might be greatly increased in California by planting on a large scale, as contemplated by the Act of our Legislature. Every farmer, then, who plants a tree, not only lends a hand to the adornment of the landscape, but assists, by so much, in inviting from the clouds and retaining in the soil that most indispensable element—life-giving water.

[The above, submitted for our editorial approval, meets it with the exception of the old notion about trees influencing the rainfall. We very much doubt any such theory, but are none the less in favor of tree-panting. Plant trees, everybody!]

Gophers and Alfalfa.—One of the most destructive enemies to alfalfa in this State is the gopher. This little rodent digs into the soil and works his way along under the surface from root to root, cutting each one off as he comes to it. The only way to make alfalfa a good success on land where are plenty is to destroy the gophers. This seems to be a very difficult problem. Irrigation, however, is certain destruction to them. To alfalfa irrigation is very beneficial in other ways than killing gophers. Irrigation, then, in such cases works a double benefit, and is doubly important. Where land can be irrigated at pleasure during the year the amount of alfalfa that can be produced is almost incredible. It can be cut as many as six times in a year, yielding as many as two to two and a half tons each cutting. With a good start in the fall, it grow almost as rapidly during the winter months in this State, especially where protected from severe winds, as in Summer. Where land cannot be irrigated, or the gophers kept out in some other way, it has to be seeded every fourth year. As it is thinned out from year to year it is a very good plan to sow some oats or barley each fall, after the first rains, and harrow thoroughly with a sharp-tooth harrow. As the clover grows thinner this will keep up the crop to a paying standard till it becomes necessary to reseed.—*Sacramento Record*.

Irrigation.

Proposed Legislation in Favor of an Irrigation System.

We are glad to observe that public attention is called to the question of a general system of irrigation in this State.

The subject is new to most people, and its very importance to a large portion of the State requires that it should receive a most searching examination. It is certain to come before the Legislature at its approaching session, and we believe it to be of paramount importance. We by no means expect to see any well-perfected and desirable system devised in a moment, and it would be contrary to all our experience in legislative matters if some plans should not be presented which will be full of loopholes for all sorts of jobbing and rascality. Indeed, we are not disposed to deny that in the present state of morals and politics it will be a very difficult matter to pass a law on this or any other subject, in which private or corporate interest will not in some underhand way be made to override those of the public. We do not doubt that irrigation will be made a hobby by designing men that have no higher or better purpose than to plunder the people. If the fact should be otherwise, it will be an isolated case without a parallel in all our past legislative history. But even this danger, evident to every one who knows what influences determine legislation, should neither cause us to delay nor to abandon the attempt to secure such wise and just legislative aid as will give to the farmers of the State an effective and general system of irrigation. Necessity prompts the attempt, and thousands will rejoice if it prove successful. The Santa Rosa *Democrat* thinks that no final legislative action should be taken until the session after the next. It may prove impracticable to do anything even as early as that. The interests involved are so great, the expenditures and the facts required to be definitely ascertained so numerous, that it may take many years to devise a safe and practical system, and carry it into full execution. The history of the immense irrigation works in India will convince any man that the magnitude of the task and the difficulty of the engineer problems to be solved, are not to be rashly encountered. Scarcely any works of human hands, in ancient or modern times, can rival in cost and difficulty the irrigation canals that have been already constructed, and the works which California needs would require to be on a scale no less stupendous. It can scarcely be expected that such a system can be put in full operation before the end of the present century. But knowing all this, we nevertheless desire to see a beginning made. In some portions of the State the work will be simple and not inordinately expensive. We know facts enough already to make an intelligent beginning in the San Joaquin valley.

There are 13,000,000 acres of irrigable land in the Sacramento and San Joaquin valleys and their dependencies. Of this a single corporation (the California Canal & Irrigation Company) once proposed to irrigate 9,600,000 acres, or about 15,000 square miles. We do not advise any stretching of State perogatives or violation of the Constitution, nor do we think that intelligent advocates of irrigation desire any such thing. If we understand what they seek, it is simply to have the lands districted where irrigation is needed, to have power granted to the land holders, to elect Commissioners to act for them as an association, and to issue the bonds of such association, to provide for the construction of the necessary works. The land owners to be liable to taxation to pay these bonds, and the right to use the water, to be free to all taxpayers without further assessment or payment. It seems to us that there need be no delay of two or more years in conferring such rights and privileges as these. The land owners only ask to tax themselves for their own benefits, and to pledge their credit for the means of increasing the value of their lands and the annual profit arising from their cultivation. If there is no constitutional objection, we would certainly desire to see so much done without delay. It would at least serve as a beginning and give the resident of the districts subject to drouth some reason to hope for better times. Irrigation is a matter of State importance, second to none other, and prompt action alone will keep the region west from the San Joaquin from being depopulated. Many have been absolutely compelled to abandon the country within a few weeks, and many more will follow them ere long if there is nothing done for the promotion of irrigation. We think the Legislature may safely authorize a beginning of the work as proposed, leaving it for the future to determine what further legislation may be necessary.—*S. F. Chronicle.*

THE Sacramento *Record* has this to say about irrigable lands in Sacramento county: If the owners of the uplands in Sacramento county, east of this city and lying between the American and Cosumnes rivers, would confer this power upon the State, and expend say $10 per acre, (or $5 per acre might answer) in an irrigation scheme, that entire district would soon be blooming like a rose, and all the people on it might become wealthy for then ten or twenty acres would produce as much as one hundred acres produces now. And the increased crops would pay in two years the entire cost of the scheme.

The Horse.

THE HORSE DISEASE.

THE SAME NATURE AS THE EPIZOOTIC, BUT OF LESS INTENSITY—EAST, WEST AND IN CALIFORNIA.

An annoying epidemical disease, resembling the epizootic in all its symptoms, is spreading rapidly among the horses of this city. Three weeks ago a *Tribune* reporter visited the different street railway stables to learn if this disease, then prevaining in Buffalo, had reached New York in its march eastward. At that time no trace of it had been discovered. It was asserted on all sides that horses were more free from disease of all kinds than they had been since the remarkable attack of epizootic almost three years ago. In June the horses of the Eighth and Ninth Avenue railways were suffering from inflammation of the bowels and pleurisy, brought on by sudden weather changes. Persons who have made horse disease a study, and who are familiar with the epizootic, say that the prevailing distemper is of the same nature, and differs only in its intensity. The horses are taken with a running at the nose, accompanied with a hacking cough and a sore-throat, but seem to lose none of their vitality, and maintain a good appetite. Thus far about 200 hundred horses from this cause have been unfit for work at a time, while at least 12,000 have been attacked. Most of those, however, have been worked as usual, and no aggravation of the disease is expected unless the weather should suddenly become wet and cold.

A *Tribune* reporter called at many railroad and hotel stables yesterday, and learned that the favorable change in the weather since the rains last week and Sunday had greatly mitigated the disease. Friday night, September 10th, was exceedingly cold, and on the Saturday a few horses in the northern and eastern part of the city were taken with the disease. On Thursday, September 16th, said the surgeon of the Third avenue stable, the disease in that quarter of the city became widely prevalent. The horses were taken suddenly with violent coughing and slight running at the nose. The doctors pronounced it epizootic at once. The horses, however, showed no running at the eyes, which looked as bright as usual. By Saturday two-thirds of the horses in the stable were coughing more or less. The Third Avenue Company has at present 1,781 horses at the Seventieth street stables. Not an animal had been unfit for work. Nothing was done except to blanket those most afflicted and protect them from drafts. The surgeon said that ordinary colds usually prevailed among the horses from the beginning of the Autumn equinoxical storms to November 10. He thought the rain of Sunday had increased the malady, but from the appearance of the horses, he believed that three days of fine weather would drive away all appearance of epizootic symptoms. He had received intelligence from Philadelphia, where the horses seemed to be very much affected by the disease, notably in North Eleventh street.

Mr. Tracy, of the Park boarding stables, said he became alarmed on Friday at the appearance of the disease among his horses, and took some pains to inform himself about its spread through the city. In traveling to the City Hall by the Third avenue line, he saw very few horses that were not more or less affected, and some of them were coughing violently. He regarded the disease as epidemic, and, at the authority of Drs. Licntard, Castanach and Nostrid, pronuneed it a mild form of epizootic. On Friday last the disease had not appeared in the Chrystie street stables. On the Saturday following nearly horse in these stables were taken with coughing and sore-throat. All horses in the neighborhood or Central Park, both in public and private stables, are affected. It is obvious, from the way the disease has spread over the city, that there is an infection in the air. The epidemic is thought by many to have proceeded from western cities. Mr. Tracy, as soon as his horses were taken, closely blanketed them, and fed hot mash with a little vinegar sprinkled in the feed. His horses were improving very rapidly.

The Superintendent of the Broadway railway stables said out of 1,200 horses about 900 had had the disease since last Thursday. He considered the distemper epidemic, but feared no serious consequences from it. He said the horses began coughing the moment they left the stable for the open air, and thought that horses in private stables, which were usually weighed down with blankets, were the greatest sufferers from the disease. The change from a warm stable and heavy blankets to the open air was apt to induce the worst symptoms of epizootic. Two or three horses have been seen affected to an extent suggestive of the epizootic days of 1873. The disease has appeared in all of the stables on the avenues.—*New York Tribune.*

The same disease has also appeared in the Western States.

The Cincinnati *Commercial* of a later date, in speaking of the disease says: "It is mitder in form than the disease which prevailed in the Fall and Winter of 1872, and less serious in its consequences. It appeared first about three weeks ago, and many of the horses at that time affected are now over it. The disease is mainly confined to the lungs and bronchical tubes. There is none of the disgusting running at the nose that made the disease of 1872 so disagreeable to handle. The present disease is about the equivalent of bronchitis in the human subject. They are attacked with a cough, the pulse is quickened some fever supervenes and the disease gradually dies away, without dropsy or other unpleasant sequelæ.

Horses on this coast are also affected in many localities. A gentleman in Oakland who owns a fast horse, is down with this disorder says that a little exercise causes great pain in the lungs, which are inflamed, and that violent exercise would cause dangerous conges-

tion of the lungs. Rest with gentle exercise is recommended.

The disease with the horse is analogous to the bad colds now prevalent among our people—accompanied with sore-throat and lung-cough. As complete rest, warmth and light diet is the best treatment for human beings, who soon recover under favorable conditions; so the rational treatment is the best for the horse. Exercise with exposure to drafts of cold air, etc., and harsh treatment is likely to prove fatal. Kind, considerate treatment is always best, and in case of sickness is absolutely essential to perfect recovery.

What a Veterinary Surgeon Says.

Mr. T. H. Larcom, proprietor of the Good-enough horseshoeing establishment of San Jose, also a graduate from a veterinary school and whose opinion is worth something, says that a horse with the epizootic should be carefully blanketed, kept out of all drafts of winds, be fed lightly with good hay and carrots or other vegetables, given no cold water, but all he will drink of water with the chill taken off or tepid water. A fire-shovel full of hot ashes from the stove is good to throw into the water once a day; in effect, it loosens the phlegm and false membrane, which accumulates in the throat, lungs and stomach. A handful of scalded bran is also good to add to each bucket full of water the horse drinks. No other medicine is advised, if the bowles can be kept regular with bran mashes and vegetable or green green feed. Rest to a horse in this condition is requisite to a speedy cure. A little gentle exercise is all that should be allowed and by no means should fast driving or hard pulling be allowed, even for a short time.

These items were given us after we had writtten the few suggestion in the preceding article, but we gladly add them for the better guidance of our horse owners, in the treatment of this prevalent horse disease.

The Dairy.

Making Cheese in a Small Way.

In answer to a correspondent who wishes to know the *modus operandi* of making cheese in a small way, we can do no better than to quote from that world-renowned dairy-man, X. A. Willard, who thus tells how in the *Rural New Yorker:*

Good, fair family cheese can be made with even rude implements and appliances. If nothing better is at hand, a common wash-tub, if clean and sweet, will answer the purpose for setting the milk and working the curds. A hoop must be had from the cooper in which to press the curds. Let it be (for a small quantity of milk) say from eight to ten inches in diameter (top and bottom) by twelve inches high, and fitted with a follower. A very good press can be made in a few hours from a twelve-foot plank and a few pieces of scantling. About a foot from either end of the plank set up two short pieces of scantling five or six inches apart; fasten them firmly to the plank with bolts and pins. The lever may be a joist, say four x six and fourteen feet long. One end is secured by a pin passing through it and the uprights at one end of the plank and set one and a half feet above the bed-piece of the plank. This lever is to move freely up and down between the uprights at the other end, and a weight hung at this end of the lever will give you a press that will do good service. The weights at the end of the long lever are a stone or two from the field. Another lever is arranged for raising the long lever or press-beam, without removing the lever, which, in that case, may be made stationary. The hoop containing the curd is placed on the plank near that end of the lever which is secured with the pin. Blocks are put upon the follower, and the press-beam let down upon them, and in this way the cheese is pressed.

A long, thin wooded knife will do for cutting the curds. A gallon of milk, wine measure, will make nearly a pound of cheese or if the milk is weighed, ten pounds will make one of cheese, and thus the weight of the cheese may be calculated from the quantity of milk in the tub.

The night's mess of milk may be strained directly in the tub, and if the weather is warm a pail of cold water should be set in the tub to cool off the milk and keep it sound during the night. In very hot weather it may be necessary to change the water several times. In the morning skim the cream which may have formed on the milk, put it into the cloth strainer, and pour the warm milk from the morning's milking into the mass, and in this way cream will be in condition to be worked back into the milk. It will be proper to add a word in this connection in regard to having the milk in proper condition when it goes into the tub. In hot weather, and especially in hot climates, care should be taken not to worry or overdrive the cows. They should not be irritated in any way, and they should have an abundance of good water and everything provided for their comfort, otherwise the animals may be in a feverish condition, and yield imperfect milk that may cause trouble.

The night's and morning's milk having been mingled in the tub, and the number of gallons or its weight known, a portion may be taken out and heated in pans over a common stove. The pan holding the milk should be set in another pan holding water or over a kettle containing water so as not to scorch or burn the milk in the pan. Heat the milk and pour it into the tub until the mass indicates a temperature of about eight-five degrees Fahr. by the thermometer, then add a quantity of rennet, (which has been previously prepared by steeping the dry skins of rennet in water) sufficient to coagulate the milk, say in from forty to fifty minutes.

Now put your finger into the curd raise it slowly, and if it readily splits apart, the mass is ready to cut into checks with the curd knife. After cutting into checks two inches square, let it remain at rest ten or fifteen minutes for the whey to form; then carefully break with the hands by lifting up very gently, and when the mass has been gone over, let it rest for ten or fifteen minutes for the curds to subside.

Now dip off a portion of the whey into pans, and heat on the stove in the same manner that the milk was warmed. In dipping off the whey a cloth-strainer is thrown over the tub and the whey dipped from off the top of the strainer, so as not to dip or remove the curds. In the meantime continue breaking by gently lifting the curd until the particles of curds are about the size of small chestnuts or large beans; then pour in the heated whey until the mass indicates a temperature of from ninety to ninety-eight degrees. Do not be in a hurry, but take things leisurely, continuing the breaking or stirring of the curds while the heat is being applied. It may now be left at rest for a half an hour, and then stirred, so that the particles may not pack or adhere in the tub, and this treatment continued until the curd has a firm consistency. Take up a handful and press it together in the hand, and if, on opening the hand it readily falls to pieces, it is about ready for draining. Another test is to chew a bit of curd, and if it "squeaks between the teeth," it is about ready. The mass now will have a slightly acid smell and taste, which is readily distinguished by old cheese makers, but not so readily by the inexperienced; but, to the latter, one of the best tests is to take a little curd in the hand, squeeze out the whey and touch the ball of the curd to a hot iron, then, in removing it if the curd spins or draws out in small threads, it is ready for the whey to be removed. Throw a cloth-strainer over the tub and dip off the whey down to the curd; then put the strainer on a willow clothes-basket, and dip the curd into it. It may now be broken up with the hands, and when pretty dry may be salted in the basket or returned to the tub for salting. Salt at the rate of four or five ounces to sixteen pounds of curd; mix thoroughly, and put to press.

After remaining from two to four hours in press, take the cheese out of the hoop, turn it bottom side up in the hoop and put it to press again leaving it under pressure till the next morning, when it may be removed to the shelf in the dairy room. Very small cheese need not be bandaged. They should be rubbed over with a little fresh butter, melted and applied warm, and the cheese turned and rubbed daily with the hand once a day until well ripened.

Horticulture.

The Gardener's Lament.

Yet none a garden plant
Unless he count the cost;
For there is labor lost,
And late and early frost,
His dreams to haunt.

I planted mine with care,
And soon the young plants grew.
Just then the worms, a few,
Exposed themselves to view
And gathered there.

I watched with anxious care
Each plant and tender shoot,
And dreamed of early fruit;
Alas, worms at the root—
Worms everywhere!

I set my banner there,
And tunnel, dug and bore;
My siege-guns then I lower,
Shotted with hellebore—
Death everywhere.

The slain and wounded lie,
Full twenty thousand killed;
And yet their ranks are filled,
While all are are fully drilled
To fight or die.

My beans and early corn,
My bed of early beets—
These all the cutworm eats.
I'm sick with sore defeats,
And feel forlorn.

And you, who live in ease,
And little care or know
Who wields the spade or hoe,
If things will only grow,
And you have peas,

No need for you to fast.
Let others fight the foes;
Though you must have your woes—
The moth will eat your clothes
And you at last!

—[Worcester Ægis and Gazette.

To Grow Chestnut Trees.—If you want to grow chestnut trees, the fruit must be planted as soon as it is perfectly ripe and while it is in its fresh state. If a few trees only are wanted, plant the chestnut about three inches deep, just where it is desired to have the tree stand permanently. They do better not to be transplanted, and sometimes will not grow. When they reach a proper height the stems can be grafted with any better sorts attainable. But it requires a careful hand to graft the chestnut to insure its growth. When fairly started, the young tree pushes ahead rapidly, and often takes one by surprise in the earliness of its bearing.—*Ex.*

We have in California hundreds of farms, situated in the foothills, which could be made to yield a handsome revenue by setting out orchards of late apples. Late apples always command a good price and are never a drug in the market. Early fruit must be sold as soon as picked, whatever the price; but late or winter apples seldom have to be sold for less than two dollars per box. Besides this, there are many other fruits which are adapted to the foot-hill climate. There is no better vineyard land in the world, and it is surprising that more vines have not been planted in the mountain sections. It is far easier to cultivate grapes on sidling land than to plow and reap grains, and that, too, when the expense of harvesting hilly land is so much heavier than valley land. A few years will probably make a wonderful change in the hills of California.—*Ex.*

Value of Evergreens Among Fruit Trees. —A well-grown evergrgreen tree gives off continually an exodium of warmth and moisture that reaches a distance of its area in height; and when the tree-planters advocate shelter-belts, surrounding a tract of orchard of fifty or more acres, when the influence of such belt can only trace a distance of the height of the trees in said belt, they do that which will prove of little value. To ameliorate climate, to assist in prevention of injury from extreme climatic cold in Winter, and of the frosting of the germ-bud of fruit in the Spring, all orchards should have evergreen trees planted in and among them indiscriminately, at a distance of not more than 150 feet apart. Such a course pursued will give health to the tree and be productive of more regular, uniform crops of fruit.—*Ex.*

Planting Forest-trees.—For the purpose of making tall, limbless trees valuable for timber, close planting is advisable—say four by three feet apart. The larch is planted three feet apart each way in England. In five and one-half years, one-half is cut for poles for hurdle-fence, and in ten years one-half of the remainder is cut for posts. The remaining trees, thus left six feet apart, are allowed to complete their growth.

"What shall I cook?" is a short but vexatious question, engrossing more serious thought probably than any other one question in the world. Many a good and industrious wife can be greatly relieved, and many a farmer's table bless his sight and appetite, by providing now for a good garden. If you love your wife and daughters, do not put it off for money-making enterprises on the farm.

Two Crops in One Season.—The Gilroy *Advocate* is informed that Geo. Headen & Co. of that place, are tilling a piece of land—50 to 60 acres—from which they have raised this year a good crop of barley and a second crop of potatoes. The barley was cut in June and the potatoes planted afterwards. They are now bringing the latter to market. They have realized 5,000 sacks of 100 pounds each, of as fine potatoes as any the country affords. A sample may be seen at the Bank of Gilroy, which weighs 2^{1}_{4} pounds. Of course this is a picked one, but the average is exceedingly prolific.

France, but for whose aid and sympathy given to our fathers a hundred years ago, America would scarcely have been a nation at all, is likely to do herself great credit next Summer at the Centennial, and is to occupy twice the space originally designed for her in the different buildings at Philadelphia.

The Ventura *Signal* tells of a beet weighing over 1,100 pounds avoirdupois which has been grown in Williams' gardens at San Buenaventura. "Beet" this who can.

The Flower Garden.

Gillyflowers.

LD-FASHIONED? yes, I know they are,
Long exiled from the gay parterre,
And banished from the bowers;
But not the fairest foreign bloom
Can match in beauty or perfume
Those bonny English flowers.

Their velvet petals, fold on fold,
In every shade of flaming gold
And richest, deepest brown,
Lie close with little leaves between,
Of slender shape and tender green,
And soft as softest down.

On Sabbath mornings, long ago,
When melody began to flow
From out the belfry tower,
I used to break from childish talk,
To pluck beside the garden walk
My mother's Sunday flower.

In Spring she loved the snow-drop white,
In Summer-time carnations bright,
Or roses newly blown;
But this the flower she cherished most,
And from the goodly garden host
She chose it for her own.

Ah, mother dear! the brown flowers wave
In sunshine o'er thy quiet grave
This morning, far away;
And I sit lonely here the while,
Scarce knowing if to sigh or smile
Upon their sister spray.

I will could sigh, for grief is strong,
I well could smile, for love lives long,
And memory keeps even death
But if I smile, or if I sigh,
God knoweth well the reason why,
And gives me broader faith.

Firm faith to feel all good is meant,
Sure hope to fill with deep content
My most despairing hours;
And oftentimes He deigns to shed
Sweet sunshine o'er the path I tread,
As on to-day, these flowers,

And chose He not a bearer meet
To bring for me those blossoms sweet—
A loving little child?
And child and bonny blossoms come,
Like messages of love and home,
O'er waters waste and wild.

—[All the Year Round.

QUERIES.

1. What will prevent mildew from accumulating upon rose-bushes?

2. How can the parasites which attack themselves to Scarlet and Lilac bushes, and also to some varieties of the Acacia, be best removed?

1. Nobody has yet found out how to prevent or eradicate the mildew on rose-bushes, without destroying the bushes themselves. A gentleman in San Jose who has been trying for years to do so, says he will give $100 reward for a practical method of preventing mildew on roses. This mildew attacks the growing, tender stalks and ends of shoots first, then blights the buds, and finally withers up the leaves without killing the bushes. Carbolic soap-suds, ashes, lime, sulphur, blue vitriol, tobacco, snuff and smoke, hellebore, etc., have been tried in vain; also pruning of root and branch, charcoal about the roots, irrigation and dry culture have been tried with little effect. The Giant of Battles is the variety that appears to be affected the worst.

2. A wash of carbolic soap-suds is found to be efficacious in removing the scale louse. Lime wash or blue vitriol will do it; also tobacco wash and many other things. This is laborious but essential. Where one wishes to destroy the scale "on a large scale," the Babcock Fire Extinguisher, which throws a stream of carbonic acid gas and water is good. In case this is used, a quantity of carbolic acid or whale oil soap should be put into the water first. This will also destroy the woolly aphis in tree tops and other insects as well. A thorough washing in some shape with either of the above named remedies is good for the scale louse.

Now is the season to clean up the flower garden. Trim roses, shrubbery, vines, etc., and remove all decayed stalks of plants. Hoe up weeds while they are small.

Potting Plants.

The mold for potting should be light and loamy, the fertilizing material used being well decayed. If the soil is rich of itself it is better to be either very sparing with the fertilizer, or to dispense with it altogether. In the bottom of the pot place several small pieces of crockery or similar material to assist the drainage; and in setting the plant, be careful to keep it well down in the pot and to press the mold moderately around the roots. The surface of the mold should be about half an inch below the level of the top of the flower-pot. Slips should be planted close to the sides of the pot, and in small pots.

When a plant becomes pot-bound, that is, when the roots become matted around the sides and bottom of the pot, the plant after it has ceased blooming should be re-potted in a larger pot. It is not necessary to remove any of the mold from the roots, but simply to fill in the space in the large pot with new and rich mold.

Plants kept in the windows should be turned every morning, or the light, striking one side only, will draw the plant to that side so that all its branches and leaves will turn towards the window. The water in saucers should never be applied to the plants. In cutting slips of any plant always choose the youngest branches, and cut off the slip at a junction of a joint or leaf, since the roots shoot more readily from the joints. If you follow these directions, and put sufficient sulphate of ammonia to just taint the water applied to your plants, you may cultivate with success almost any plant, even though you are an entire novice.—Scientific American.

How to Sow Small Seeds with Success. | Novices in floriculture make frequent failures with minute seeds, like those of the Lobelias, the Mimulus and the Calceolaria, and even experienced florists do not always succeed with every sowing, as such seeds are very delicate and germinate only under the most favorable conditions. Have the soil in the pot, pan or box—a shallow box is best—composed of leaf mold and clean sand, two parts of the former to one of the latter, sifted, or otherwise made very fine. Make the surface even and smooth and press slightly; then sprinkle it by holding a wet brush over it and drawing the hand across the bristles so as to throw a fine spray upon the soil. On this prepared surface sow the seed, and scatter over it the finest possible sprinkling of fine clean sand. Now cover the pot or box with a pane of glass, and keep it in the shade, watering, when necessary, with the spray from a brush, as before directed. The soil must not be permitted to get dry, nor must it ever be deluged with water. If the seeds be sown, as is generally the case, on a loose surface, and then watered with a watering pot, they are mostly carried down with the water so deep into the soil that it is impossible for them to germinate.—Rural Carolinian.

Washing House Plants.—Have a large pail or tub filled with warm soapsuds. Then spread the fingers and palm of the left hand over the soil in the pot, turn the branches topsy-turvy into the warm suds, swing the plant briskly in the water till every leaf has become completely saturated, then put it through a pail of clean water and rub each leaf with the thumb and finger. Give it a good shake, and when dry return it to its place in the window. The leaves of a plant are its lungs, each leaf being furnished with hundreds of minute pores, whence the plants breathe in carbon and exhale oxygen. The perspiration of plants is said to be seventeen times that of a human being. Many plants never bloom on account of the accumulation of dust upon their leaves. A plant too large to lay down in a tub may be syringed and each leaf rubbed with the finger and thumb, which are better for the purpose than a brush or cloth.—Land and Water.

The Boston *Commercial Bulletin* writing of the trade in flowers, says: The great specialty of Boston is roses, which are not only varied in sufficient quantities to supply the home demand, in even the busiest season, but are sent to New York in large bulk, probably half of the immense number sold in New York coming from Boston. Other specialities are lilies-of-the-valley and carnations, which are grown in immense numbers by our leading florists; while successful attention is paid to all varieties. The New York specialty is tube-roses, and that of Philadelphia camelias.

Thanksgiving.—Governor Pacheco has issued a proclamation for Thanksgiving, November 25th, the same day as fixed by the President.

Household Reading.

Chats With Farmers' Wives and Daughters---No. 10.

BY "JEWELL."

Economical Young Women.

THIRTY-one young ladies in Warsaw, Kentucky, have signed a new kind of pledge, which reads:

We, the undersigned ladies of Warsaw, desiring by our example to promote economy and to discountenance extravagance, and thereby lighten in some measure the burdens of our husbands, fathers, sons and brothers, by prudent retrenchment in our household expenses therefore, pledge our words of honor, each to the other, that we will not, during the period of one year from the 1st of May 1875, purchase any material for wearing apparel, the cost of which shall exceed twenty-five cents per yard. And shall further promise to observe a strict economy in all our household purtinances, and cheerfully add by those delicate sacrifices to the general stock of home comforts—too often dispensed with for the frivolous outside adornment of the body alone.

Now that has the true ring to it and is just what should be done, either singly or in numbers, by our women of California, whose expenses for dress and useless fiuery astonishes the world. For we have no aristocracy here, *compelling* a certain style of court-dress and the like. No, our free country is "governed by the people and for the people" they say. I should judge so indeed, by a peep into fashionable society and its devouring, absorbing, expenditures for dress and style! No poor girl, however refined or delicate her organization, however intelligently endowed, or lovely in face and form, can command respect, or enter society of refinement and culture or wealth without *money*, in her own right or her family. She must dress well or wealthy people will not notice her—save with a pitying nod of recognition—and to such an extent is this carried that our women of slender incomes, and moderate brain capacity, find no time for much else besides keeping the household machinery running and planuing how to provide against the inevitable wear and tear of clothes for themselves and girls—if they wish to be thought *respectable* even.

Now I ask. is this right, is it ennobling to the race, and are we making the most of ourselves and girls by so doing and living? While I admit the importance of dress from a physiological standpoint, an economical standpoint and a becoming standpoint, I cannot for the life of me see why our social position should be measured by our appearance in dress. When a lady in her silks and velvets receives more attention and courtesy from the dry goods clerk, or the judge on his official bench, than the same lady in a simple calico, (which is true, I have it from good authority) it is about time to look at this question and endeavor if possible to overcome its evils. If our women are to become useful and healthful members of society—earning a living and a reputation among men—they must not be cramped with the trailing dress skirt, the life destroying girting of the waist, and in fact the all absorbing thoughts of what to wear, how to look best, &c. Our boys are not troubled in that way, and though often careless, are still respected. I often ask myself, are we mothers to blame? for in spite of our example and precept, our six and eight year old girls *will* catch the prevailing spirit of the age and beg for trailing skirts, and show every sign of demoralization in dress—even in play. My only hope then is in combining our strength by numbers and do exactly as the Kentucky ladies are doing, and my word for it, the husbands, and fathers and brothers would soon feel ashamed of *their* many useless expenses too, and give up smpking, chewing and drinking, and join in the general desire to save for some good worthy purpose. Only think of the money, time, health and self-respect that could be saved for the adornment of home and culture of mind by so doing!

Grandfather's Letters---No. 2.

Who hath not loved, hath not lived.

Dear "Jewell" and "Esmeralda:",—I see my former communication was not consigned to the waste-paper box by the editor, and am I to infer from that that he and you want something more from Grandfather to criticise?

If the subject is not as great a success as it might and ought to be, you cannot but observe there is no danger of it's running out and becoming extinct. The coming-in generations are the same in this particular as were the generations thousands of years ago, in spite of any and all adverse circumstances, and the going-out generation, who have had experience, are no way loth to try the old subject over again. Since, then, it is a fixed fact that it was, is and always will be, it remains for us to make it a *success*, and a good, firstrate one, the best way we can. To this end, I shall adhere to the *abnegation plan* I started with, and say to myself, were I on the point of starting again on life's great journey, think, *think*, THINK. Yes, we may well think thrice and think always when another's happiness is committed to our care, dearer than our own—think what her temperament and disposition are—think what are her likes and dislikes—think what she has given up to give herself to me—and above all, to so think as to have such a perennial flow of love, as to make *self forgotten* in favor of her whom I have chosen.

To do this we must *habitually* feel our great responsibility, habitually feel, how should I demean myself by a hasty, ill-tempered word or unkind look, habitually feel the importance of keeping up that suavity of manner, polite, courteous demeanor, so agreeable to all. And are w eto suppose it to be less so to her whom we have chosen above all others to be in daily contact with? With some all this seems to flow forth spontaneously, while with others it requires a good deal of careful and continuous cultivation. I take it we shall all be the better for a little timely thought on the subject.

Ah, this love principle is the fountain from which should flow that which will ever make it a success. This abounds at and previous to marriage; and here again I appeal to the sterner sex, if he is not the first formation party to its loss by indifference or neglect, maybe for want of thought or knowledge? We make a great mistake in supposing that all or the chief part is accomplished when the object of our affections is "secured." No. Then is but the beginning of the work to make it a life success. Then comes the *thinking*, the *doing*, the abnegation, the earnest effort to *keep* the love principle to its full height, and ever have it go on increasing. So it may, but not without knowledge, thought and care. Indeed, without these, what can be accomplished in any departuent of life? To me it seems most strange that this, of all subjects the most important, should be entered upon in so much ignorance and want of thought and care. Not that we can expect, in the present condition of things, that perfect success you would desire. But I do contend the stronger sex should be the leaders in the right direction. Alas, they are too often the reverse. But in these things there is no one a more thorough co-operationist than

GRANDFATHER.

Domestic.

About Husbands---To the Gals.

BY JOHN G SAXE.

A MAN is generally better satisfied when he has a good dinner upon his table than when his wife speaks Greek.—Sam Johnson.

Johnson was right. I don't agree to all
The solemn dogmas of the rough old stager:
But very much approve what one may call
The minor morals of the "Ursa Major."

Johnson was right. Although sometmen adore
Wisdom in woman, and w th wisdom cram her,
There isn't one in ten but thinks far more
Of his own grub than of his spouse's grammar.

I know it is the greatest shame in life;
But who among them (save, perhaps, myself,)
Returning hungry home, but asks his wife
What beef, not books, she has upon the shelf.

Though Greek and Latin be tha lady,s boast,
They're little valued by her loving mate,
The kind of tongue that husbands relish most
Is modern, boiled and served upon a plate.

Or if, as fond ambition may command,
Some home-made verse the happy matron show him,
What mortal spouse but from her dainty hand
Would sooner see a pudding than a poem?

Young lady, deep in love with Tom or Harry,
'Tis sad to tell you such a tale as this;
But here's the moral of it: Do not marry;
Or, marrying, take your lover as he is—

A very man, with something of the brute,
Unless he proves a sentimental noddy,
With passions strong and appetite to boot—
A thirsty soul within a hungry body.

A very man, not one of natures clods,
With human failings, whether saint or sinner,
Endowed, perhaps, with genius from the gods.
But apt to take his temper from his dinner,

Familiar Talks---No. 4.

BY SNIP.

GOOD LIVING.

DEAR AGRICULTURIST:—One of my neighbors, a farmers's wife, sets her supper-table to suit me exactly. Tea, bread and butter, fruit and plain cake or cookies. Sometimes honey, of which the children are very fond, takes the place of fruit. Never, at any time or under any circumstance, does she put hearty food on the supper-table. The children have their supper by five o'clock, are in bed early and are as healthy as one could wish for, while both father and mother are delicate. "I intend, if possible, to enable my children to avoid the suffering I have been obliged to endure," she said to me one day. I think she is right in maintaining that light, early suppers will form an important part in

the success of this resolve. Dr. Hall says that nothing should be placed on the tea-table but bread and butter and tea, and advocates letting the tea alone, or substituting some other drink less injurious in its effects. So far as my observation has gone, I find that in families where children are allowed to eat meat, potatoes and other similar food, they, as well as the older members, oftentimes fretful when they get up in the morning. If such food is placed on the table and partaken of by the elders, it is difficult to prevent the children from following the example set before them. The lady referred to above said that when first married her husband wanted hearty food at night, but after reasoning the matter, he yielded to her ideas on that subject. There is not a harder working man in the State.

Another neighbor places upon the supper-table such food as is found upon the dinner-table. Often roast mutton or beef with all the accompanying dishes are eaten in the evening, The parents are fretful, impatient and quick-tempered, and often complain of not sleeping well; the children are no better off. Can you see the difference and the reason for it? The wife in the latter case is anxious to have only light articles of diet on the table in the evening, but her husband says he cannot work as hard if he does not have hearty food every meal. He does not work half so hard as the first mentioned gentleman. Wonder how he can stand so much hard work. I feel like telling him to read Dr. Hall's "Health by Good Living." I suppose he, like many others, would pronounce it all a humbug that any one could work hard on lighter food than is usually found on a farmer's table. We often have made our supper all of oat-meal or graham flour hasty pudding and milk. Corn-meal during the warm weather is not so good. I am reminded by the above that several who do not like graham bread very well think better of it when made as follows:

NICE GRAHAM BREAD.

The batter is mixed with half white and half graham flour, and kneaded out with white flour. I believe this is the way it is made at Dr. Jackson's water-cure establishment. I like better to make the batter with graham flour entirely and then knead out with white flour.

Not long ago a lady friend gave me a cooky to taste, telling me it was made with graham flour. It would hardly suit the taste of an epicure, but I thought it very good; a little dry, perhaps, but healthful. She told me she often made ginger-bread with this flour. I do not know if that would be good or not, but I *do* think that graham bread should be found on the table oftener than it is.

First Letter.

BY DUSY DEE.

I never wrote anything for a paper in my life, but I feel so interested in the California Agriculturist, that I want others to write, and if all hold back because they never wrote before we should have too few new hints. I think almost anything one can say upon

PRACTICAL SUBJECTS

Interesting; especially about children—their management, clothing and food. I look for every suggestion with interest, and have no doubt many others do the same. Mothers and housekeepers could send forth many valuable suggestions through the columns of the Agriculturist, and do a great deal of good.

I see several letters from the little folks. I read them to my little ones, who are too young to read, and they are highly pleased.

Now I must give "Snip" a hint about what to do for

VERMIN ON CHICKENS.

I have used sulphur and almost everything on my chickens, and I do believe there is no such thing as getting entirely rid of vermin on them. I find the best thing is tobacco. I sprinkle it thickly on all the nests, and I find wherever it is there is no vermin. I also sprinkle it wherever a hen hovers her chicks at night. I think a good strong wash made of it and applied to the roosts and around in the cracks and on the floors of the chicken-house would be beneficial, though I have never tried it. My husband says the chickens use more tobacco than he does, and I venture to suggest it probably does them more good than it does him.

A Few Suggestions and Recipes.

Canning Grapes.—I have been canning some mission grapes, and a little care has made them quite eatable. I put in considerable sugar, cooked them quite a while, then skimmed nearly all the seeds off and feel repaid for my trouble.

Grape Pies.—The next time you make grape pies put a large tablespoonful of flour for each pie into the fruit before putting it into the pie-plate.

Canning Quinces.—I hardly ever cook quinces till done when I put them up, because it takes so long. If they are cooked thoroughly when canned, they should be boiled in clear water until nearly done. Then put in the sugar and boil till the fruit is a delicate pink color. Apples or pears are nearly always canned with quinces, but we prefer them separate.

Quince Jelly.—To make this I use only the skins and cores. Boil them in clear water—a pint of water to a pound of fruit—until perfectly soft. Drip over night and put a pound of sugar to a pint of juice. Do not put the tin covers on your jelly glasses till the jelly has formed. Snip.

Grape Jam.—Mrs. W. R. Patten and Mrs. S. P. Hollengren, of Dry Creek, have been very successful in making grape jam from the following recipe: Stem enough grapes to make five gallons of juice—about 100 pounds will be sufficient. Squeeze out the juice through a colander, and then boil it slowly till it is reduced to two and one-half gallons. These operations will take one day. Then take the same amount of grapes and boil them in another vessel till they burst open and the seeds settle to the bottom. Pour off into the first vessel, being careful not to let the seeds escape. Boil the mixture two days. This jam will last for years, improving with age.—*Russian River Flag.*

Unfermented Wine.—Various churches in this country are introducing unfermented wine to take the place of the fermented, commonly in use for church purposes. The *Journal of Applied Chemistry* describes the method of manufacture as follows: In order to prepare it, the grapes should be allowed to thoroughly ripen. They are then picked, and the stems and all green and rotten grapes removed. The grapes are then crushed and pressed in the usual manner. The juice may be put directly into bottles, or it may first be concentrated somewhat by boiling and then bottled; in either case the bottles are put in hot water and brought to the boiling point, where they are maintained for half an hour. At the end of this time remove them from the fire and cork them tightly, while still hot, wiring in the corks. Then replace them and continue the boiling another hour. Glass bottles are better for this purpose than tin cans, though the latter may be used. An analysis of a specimen prepared in New Jersey gave the following result: Alcohol, none; sugar and extract, 23,00; ash, 40; water, 76,00—total, 1000,00. This had probably been concentrated somewhat before bottling. The flavor was fine. Some acid tartarate of potassium had crystalized out.

We have examined grape juice put up the same as fresh fruit is put into glass bottles and jars. It keeps equally well and is excellent to use as sauce in cooking or with other fruit, or as a drink. We every season put up several jars of fresh grapes for family use and like them altogether better than the juice separately. Tartarate of potassium always collects in crystals on bottom of the bottles and jars both of fruit and juice.

Coal oil lamps will be much safer to use, if the bowl is loosely filled with raw cotton or tow before putting in any oil. In case of explosion or falling on the floor, the burning fluid cannot fly all over everything.

Always fill a coal oil lamp every day before using. The bowl should never be allowed to get empty and be lighted in that condition, for the vacant space is always full of explosive gas.

Never, under any circumstances whatever, try to kindle a fire by pouring coal oil into a stove from a can. Thousands of persons have been burned to death in this way, and still the papers chronicle other victims to the actice.

An egg-producing feed for fowls, highly recommended by a fancier who has tried it, is wheat and white peas, ground and mixed together as stiff as possible the night before and used only as a morning feed.

As a drop of water falling from the house-eaves weareth and holloweth the hard stone, **not by** force, but by often falling; even so a scholar proveth learned, not by power or strength, but by much diligence and great reading.

The fact that the foot hills and some other portions of California are well adapted to the cultivation of the sumac tree is attracting attention, the leaves of that tree being an article of commerce, as they are valuable for tanning purposes.

A benevolent gentleman from Vermont applied to a Boston gentleman for aid in sending missionary to Turkey. The reply was as follows: "I have invested much in Vermont securities, and lost many thousands by the acts of your railroad men, sustained by the people and the courts. I have also lived in Turkey, and had much intercourse with her people. I would far rather give my money to send Turks as missionaries to Vermont."

The *Iowa State Leader* tells a story of a well known life insurance agent, who approached Hammond, the revivalist, on the subject of insuring his life. Hammond said he could not afford to turn his attention to such a temporary and worldly subject, but if the agent could insure his soul it might be worth while talking. The agent slowly shook his head and said it was impossible; his company did not carry any fire risks!

Now that the evenings are getting longer, it is a good time to discuss the merits of the different agricultural papers and select the best, and to urge one's neighbors to subscribe.

Hygienic.

My Neighbor's Baby.

CROSS in my neighbor's window,
With its drapings of satin and lace
I see 'neath its flowing ringlets,
A baby's innocent face.
His feet in crimson slippers,
Are tapping the polished glass,
And the crowd in the streets look upward,
And nod and smile as they pass.

Just here in my cottage window,
Catching flies in the sun,
With a patched and faded apron,
Stands my own little one.
His face is as pure and handsome
As the baby's over the way,
And he keeps my heart from breaking
At my toiling, every day.

Sometimes when the day is ended,
And I sit in the dusk to rest,
With the face of my sleeping darling
Hugged close to my lonely breast,
I pray that my neighbor's baby
May not catch heaven's roses all,
But that some may crown the forehead
Of my loved one, as they fall.

And when I draw the stockings
From his little weary feet,
And kiss the rosy dimples
In his limbs, so round and sweet,
I think of the dainty garments,
Some little children wear,
And that my God witholds them
From mine so pure and fair.

* * * * * *

May God forgive my envy,—
I knew not what I said;
My heart is crushed and troubled,
My neighbors boy is dead!
I saw the little coffin
As they carried it out to-day;—
A mother's heart is breaking
In the mansion over the way.

The light is fair in my window;
The flowers bloom at my door;
My boy is chasing[the sunbeams
That dance on the cottage floor.
The roses of health are blooming
On my darling's cheek to-day.
But the baby is gone from the window
Of the mansion over the way.

Two Ways of Feeding Our Babies.

BY "JEWELL."

The natural is the best way of course; with the mother's milk—and yet I have seen more than one bottle-fed-baby that surpassed in appearance and healthfulness, the breast-fed one—simply because the latter child was fed at any time when it was handy, or the child cried for it; the mother being of the *constitutionally tired* sort, weary with work and worry—and the poor babe living on tired, sick milk, had an old, careworn look on its face—while in the other case, baby was fed *regularly*. Ah mother's, remember *that*, every *three hours*, and on healthy, strong cows milk, no sugar, no water—nothing but pure milk; and all night without any, after baby was a few months old; for it is by habit that our infants learn to nurse all night—a torment to themselves and parents.

Dr. Fuller Walker of New York says: "Undoubtedly the gravest error committed by parents, is in the matter of giving food to their children. I find it almost always the fact that a child suffering from *inflammation of the bowels*, has been fed (if it is dressed right) with corn starch, coffee and tea, some upon milk, bits of bread, meat cake, and a bit of everything there is going about the house. Not more than ten cases out of the 200 occurred in infants below the age of six months, and not more than twenty-five in children over three years. These facts show that bowel complaints commence in children from the time those having charge of them, begin to stuff them with a variety of food, much of which is totally unsuited to their little stomaches and tender bowels."

The other day, I was wondering why it was that so many women of the present day cannot nurse their babies, but use bottles and cows milk. To such an extent are they used, that the trade in bottles and fixings thereto, is an important one—and seems reduced to perfection almost; well, I asked myself, if it would be a type of the "coming woman!" And would the future, by opening its college doors to her, its many avenues of trade, making her equal before the law and giving her equal power in politics through the mighty ballot, was all this to be bought at the expense of her dear privilege of nursing and rearing her own children? If so, it were a dear price to pay, and I would say, keep your ballot and man's government, rather than ask *me* to pay so much for so little in return. But what is the truth regarding the mothers of to-day. Surely it is *natural* for her to nurse her children. Something is wrong if she does not. If we look far enough into her habits of life and condition of health, we will find errors existing, sufficient to cause the evil. Then mothers and daughters, let us study to know ourselves, and by living in accordance with nature's laws, return to the more natural condition of womanhood and the nursing of our own babies.

How Agnes Rears her Baby.

DEAR EDITOR AND READERS OF THE AGRICULTURIST:—There is so much truly valuable reading in the last number of our paper that I feel like sending you a few lines appreciative, not yet knowing what will be the nature of my article.

It would seem that the intellects of our contributors had been whetted for the occasion, their thoughts shine out so bright and clear. There is "Grandfather's Letter;" the columns for the "Boys and Girls," quite amusing—particularly the Little Folks' Dictionary. Then the letters from our lady friends: "Jewell," whose thoughts are always elevating and enlivening, has been more lavish than usual, giving us two chats in one visit. And here, I believe, is my subject—the talks about babies and baby-dressing.

I have put some hints, which I have gathered from "Jewell" and other like sources, into practice in the rearing of our last baby, who, ten months old, is now

SWEETLY SLEEPING BY MY SIDE.

And can assure you I thus far feel well repaid for doing so. Many times a day I call her Rose-bud, Peach-blossom, etc., for her clear, lively, healthful appearance suggests just such names. She has

A DELICATE, SICKLY MOTHER,

And has consequently been fed from the bottle since three weeks old. As *I* have been benefitted, so may others be, if I tell you just how I have cared for her. It has been done with my own hands since she was one week old; for I had great faith in the anticipated course, and was determined it should be carried out to letter, and must say I am encouraged by a spirit of triumph thus far. She has been dressed according to

"JEWELL'S" APPROVED STYLE.

In long-sleeved flannels. When changing the outside plaid flannel wrappers for white muslin, I add an extra soft flannel under-garment. Then baby takes no cold. I like to see babies in white as well as any one, but prefer the comfort of the child, and would as soon think of keeping myself in white. The only objection to the plaid flannels is that they shrink; but as a substitute there are pretty shades of waterproof, which, when trimmed with something bright are very useful and not out of taste, when we consider the benefit.

Now for the feeding, which is no less important. Although there is much said and written against the

NURSING BOTTLE,

I speak in its favor. It is better to have two for use. I prefer those with rubber and glass tube, with these cone brushes for cleansing; but the little brush for cleansing the tube loses the bristles, and is, I think, unfit. I therefore picked the bristles from the wire and substituted a piece of fine sponge. A piece on each end of the wire is good. you will find—one quite small, the other larger. I separate the tube into its parts and cleanse it, with the bottle, thoroughly once or twice a day.

PREPARING THE FOOD.

At first I used clear, sweet milk heated to blood heat, without sugar or water. At times this would be too constipating. Boiled milk would be more so. Then I must look for other food for her, for baby must have no medicine. Indian meal was suggested to my mind. I put a few spoonfuls to soak in water over night, next morning stirred and strained through a perforated tin strainer, boiled in a smooth porcelain kettle (kept for the purpose as baby's taste is delicate), added a little sweet milk and fed from the bottle through the day. This has prevented constipation.

For three months past her food has been prepared for the daytime in this way, alternating wheat-meal, oat-meal and corn-meal, without sugar, only a little sweet milk. Our little calves are fed on milk, grains, etc., without sugar, and they get their teeth without being sick. Our little girl has six teeth, has had no diarhœa, asks not to be held through the day-time but amuses herself with plays on the floor and sleeps. Has done all her

SLEEPING OUT OF DOORS

Since two weeks old, except in stormy weather. Sheltered from the wind, her sleeps have been from two to four hours in length.

Another item must not be left out—I commenced feeding her not oftener than once in two hours when awake. A few days care will regulate this, and attention to it will regulate the entire habits of the child. Since six months old she does not take food inside of three hours. Each day she has had

A FULL BATH

In tepid water. On taking her from the tub she is wrapped in flannel or shawl for a few minutes to prevent chilliness and produce an even circulation, then rubbed gently and dressed. As cold weather advances may bathe her less.

I do not write this to boast of our baby

over others, but to uphold the system of

REARING CHILDREN WITHOUT MEDICINE,

And to say, that if a child can fare thus well in the hands of a mother whose nervous system has been a wreck since the birth of her first child twelve years ago, what may not you well mothers do? AGNES.

Stock Breeder.

Semi-Annual Convention of the Shorthorn Stock Breeder's Association.

AT the last meeting of the Semi-Annual Convention of the Shorthorn Stock Breeders Association of California, Mr. Cyrus Jones, President was in the chair and Mr. Bridgeford acted as Secretary, the following business was transacted:

A Committee on resolutions on the death of G. N. Sweezy, a member of the society, was appointed, consisting of Messrs. Overheizer, Younger and Quinn. The Committee subsequently reported the following preamble and resolutions which were adopted:

WHEREAS, We have learned with much sorrow of the death of one of our most valued members, Mr. G. N. Sweezy, who departed this life since our last meeting, He was an early pioneer, grew up with the country, and was truly devoted to the interests of his adopted California. His enterprise in planting out the semi-tropical fruits, that were beginning to realize his most sanguine hopes; his ardent devotion to and admiration of the Shorthorn; his skill in breeding and feeding them; the splendid displays he has made for years at our State fairs; his manly and honorable competition, shows that he was imbued with the great interests of the country. Well we do remember the eloquent and forcible speech he made at this place one year ago, to harmonize and foster the interests of the Shorthorn breeders.

Resolved, That in his death we have lost a valued friend, and that we send our condolence to his stricken wife and children. Peace to his memory.

Resolved, That the President and Secretary forward a copy of these resolutions to the bereaved family.

The following gentlemen were elected members of the Association: M. B. Sturgiss, Centerville; E. Fore, Princeton; L. W. Shippen, Stockton; F. D. Brown, Haywood; B. Bates, Courtland; E. Comstock, Sacramento; A. J. Scoggins, Colusa; E. G. Weston, Folsom; E. A. Bridgeford.

Colonel Younger was then introduced, and delivered the semi-annual address. This address treated of stock-raising entirely. The following resolutions were passed:

Resolved, That the thanks of this Society be tenedered to Colonel Younger for his able address on Shorthorns. We commend it to the people of California as embodying much practical and useful information, and especially to the young breeders. We also thank him for his devotion to our interests as a member of the State Agricultural Board; his uniform attention to all our wants, and his manly stand for our rights. In him we feel that the stock breeders of California have a true representative.

Members and visitors, and breeders of other kinds of cattle than Shorthorns, were then called on and addressed the Society on subjects of interest to the Convention. Among thme were Messrs. Jones, Quinn and Wicks.

The question of having an annual grand cattle sale and exhibition was discussed, and it was finally resolved to hold it at Agricultural Park, Sacramento, on the third Thursday of April next.

The President and Secretary of the Convention were directed to prepare a catalogue of all the stock to be sold at such exhibition. The Convention adopted the following resolutions:

Resolved, That it is the desire of all the exhibitors of shorthorn cattle at the State fair for the Committee to make known their decision by tying on the ribbon and declaring the winner at the time of decision.

Resolved, That the thanks of this meeting be tendered to the reporters of the *Record-Union* and *Bulletin* for the interests they have taken in our meetings.

The Convention then adjourned to meet in San Francisco, April 1st, 1876.

"Foot and Mouth Disease" Among Our Cattle.

Says the Indiana *Farmer*: This disease which has prevailed more or less in England for several years, and is now sweeping off thousands of cattle there, it has made its appearance here. The Jersey herd or F. M. Churchman, of Indianapolis, has been attacked with it, and one animal died with it a few days ago. Animals affected with the disease show profusive saliva, and the feet are exceedingly tender.

In England where it has longest prevailed the disease is found to be very contagious, and a separation from the other animals should be promptly attended to. As disinfectants, camphor and carbolic acid is recommended. The feet should be washed with a solution of one part of this acid to ten parts of water, and the mouth and nostrils with a warm solution of one part carbolica cid to thirty parts of water. This is donewith a syringe.

So fatal and to such an extent is the disease prevailing in England, that a meat famine is feared there. The cattle in the western coast is more or less affected, and the strictest surveillance prevails over all stock imported into England.

The greatest care should be taken among our stock men to separate the affected animals on the first appearance of the disease. The remedy given above has proven the best that has been tried, and if administered in time usually cures.

The *Farmer* in an article on the cattle disease in England says the number of cases for the quarter ending the 16th of October, is as follows: In Somersetshire, 83,000; Gloucestersetshire, 44,000; Cheshire, 50,000; Dorsetshire, 48,000; Oxfordshire, 35,000; Warwickshire, 33,000; Norfolk, 31,000; Cumberland, 26,000. Throughout England and Wales there were for the same time over 500,000 cases.

MRS. JONES did not interfere when Jones bought a farm, but when he talked about stocking it, she put in a strong plea for the new stripped pattern.

AMERICAN SHORTHORN HERD BOOK. The time for receiving pedigrees for the American Shorthorn Herd Book, vol. 15, has been extended to December 1st. Address the editor, L. F. Allen, 1192 Niagara street, Buffalo, New York.

SAYS the Fresno *Expositor*: "Cattle in the swamps are said to be in a very bad condition. The feed is very short, and stock poor, and in consequence lage numbers are dying. They get mired in the water holes, and are unable to extricate themselves. The worst time has not yet arrived: After the rains commence, the loss is sure to be great."

Live Stock at the Centennial.

A happy solution has been reached of the troublesome problem how to provide adequately for that department at the International Exhibition which comprises horses, mules, horned cattle, sheep, swine, etc. It was manifest that these could not be accommodated in the vicinity of the Agricultural Building at the Exhibition, or within the Park enclosure, since, in the first place, the only available drainage of any such tract must be into the Schuylkill at a point above the Water Works of the city and of the Exhibition; and next, the area of disposable ground in that locality is wholly unequal to the magnitude of the live stock exhibition to be provided for.

In this emergency the Board of Finance have been fortunate in leasing from Pennsylvania Railroad Company the stock-yards, above the twenty-two acres in extent, which are now used as drove-yards by that company but from which they intend to remove in December next, and which are situated upon the south side of its main line of tracks between Belmont avenue and Forty-first street, within a few hundred feet of the principal entrance to the Exhibition Grounds. This ground is passed by street railways on both of the bounding streets, as well as by the Pennsylvania Railroad, which will erect a depot upon it for passenger accommodation, and has already sidings and platforms within the enclosure for the unloading of animals, so that these can be brought by rail from any point without transshipment. The existing shedding will be cleared away, and the whole surface handsomely renovated and supplied with stalls of a convenience and neatness unusual at live stock exhibitions. Many of the important preliminaries are already provided, since, in addition to the essential railroad facilities already mentioned, water is now distributed throughout the entire tract by service pipes twenty-five feet apart; thorough drainage can be secured through the adjacent city sewers; much of the surface is paved; large numbers of neighboring sheds and barns provide sufficiently for storage of hay, grain, etc., and hotels hard by, formerly used by the drovers, will accommodate exhibitors and their agents. When it is added that the area of the land is such as to admit the construction of a half mile track for the exercise of the animals and their examination by the judges, it will be seen that the managers of the Exhibition have provided the means of giving its due prominence to this very important department of the Agricultural Exhibition.

Special series of live stock exhibitions have been provided for as follows: Horses from September 1st to September 15th; neat cattle from September 20th to October 5th; sheep, swine, dogs, from October 10th to October 25th; poultry from October 25th to November 10th.

Persons who intend making entries for this exhibition should do so without delay, in order that the managers may be able to estimate the number of stalls and extent of other preparations that will be needed. In the large Agricultural Exhibition Building, though it covers ten acres, so many applications for space have been made by exhibitors of agricultural products and machinery as to necessitate an enlargement of the original plan. The display of live stock is likely to be no less popular; and those wishing to participate in it, even though their applications may require future amendment, should lose no time in communicating with Mr. Burnette Landreth, Chief of the Bureau of Agriculture International Exhibition, Philadelphia.

The Live Stock Interests.

The *National Live Stock Journal* illustrates the importance of the interests which it represents by referring to the fact that in Chicago last year the aggregate shipments of live stock and dairy products amounted to $115,750,000 while the shipments of all other farm products amounted only to $81,650,000. The live stock, according to these figures, represented about one and a half times the value of everything else included under the general term of agricultural products. The *Live Stock Journal*, having thus established the importance of the live stock interests, proceeds to make complaint because accommodations are to be provided at the Centennial Exposition, for only seven hundred head of cattle—a number which it considers altogether too meagre for a fair representation on the part of the country at large, as state exhibitions frequently elicit one-half or two-thirds as many. The *Country Gentleman* does not consider the complaint a just one; and believes that, taking into consideration the distance to be traveled and the expenses to be incurred, together with the fact that great care will be taken in the selection of competing animals, it is not likely that the entries will largely exceed the number mentioned. However this may be, we shall certainly have a better representation of our live stock interests by the exhibition of a limited number of the finest animals than by getting together a multitude of only average excellence. This sifting process is a good thing in this, as in many other matters.

Jersey Cattle Sale.

There takes place occasionally a sale of this favorite class of stock where the purchaser can get great bargains and first-class stock at the same time. On the 7th of October, Messrs. Isburgh & Walker of Boston sold at auction fifteen head of Jersey cattle belonging to W. J. Cook, of Foxboro. There was a good attendance of gentlemen, and he following shows the prices paid: Bull—Towanda dropped at sea Oct. 20, 1872, $50. Cows and heifers—Eva Le Sueur, imported, six years old, $55; Gravelotte, imported, six years old, $82 50; Alice, imported, five years old $72 50; Victoria, four and one-third years old, $125; Artless, imported, four years and five months, $42 50; Ripple, imported, five years old, $102 50; Jessie, six years old, $127 50; Skylark, imported in dam, dropped Nov. 26, 1872, $80; Artless second, imported in dam, dropped July 25, 1873, $50; Bergerette, imported, nine years old, $27 50; Clover, dropped Oct. 3, 1873, $85; Ivy, dropped Oct. 7, 1872, $87 50; Lilley dropped Nov. 29, 1874, $25; a heifer dropped Dec. 12, 1873, $32 50.

Jerseys ought to bring better prices than these and we are surprised that their friends didn't rally in greater numbers and bid with greater enthusiasm.—*Mass. Ploughman.*

Embargo on Cattle.—The Secretary of the Treasury has addressed a circular letter to all Collectors of Customs in the United States, announcing that no importations of neat cattle or hides will be allowed from England from the date of the order November 3d, in consequence of the prevalence of the mouth disease in that country.

Take Care of the Implements.—Don't leave your implements out in the weather. A great many farmers are too remiss about this important matter. They do not often see beyond the first cost of new tools, forgetting the constant accumulations of interest which roll up into vast sums. Costly machines and tools are often injured more by exposure to sun and storm, than by use.

Mr. Stuyvesant's Sale.

The clearing out Ayrshire sale of Mr. John R. Stuyvesant, at Edgewood, near Poughkeepsie, N. Y., Oct. 20. The same that was advertised in the California Agriculturist and Live Stock Journal. Attracted a very good attendance of breeders, some coming from considerable distances. Competition was at times rather slack, but only one animal—the grand old monarch of the herd, Robbie Bruce—was sent out of the ring for want of an offer; and while five lots were knocked down to the first bidder, competition on several of the others was very animated. The condition of the cattle certainly indicated no attempt at getting them up for exhibition. Secretary Harrison of the New York State Agricultural Society acted as auctioneer, and effected sales as below:

Cows and heifers sold from $50 to $200 each. Bulls and bull calves $40 to $155 each Summary—41 cows and heifers, average, $89-90. Total, $3,685. Five bulls and bull calves, average, $58 00. Total, $290 00. 46 head, average, $86 41. Total, $3,975.

Sheep and Goats.

The Angora Goat Fleece.

The number of these goats now in California is larger by many hundred than last year, and importation is increasing. As to the disposal of the fleece there is no longer any question. The Sacramento *Bee* is reliably informed that "every pound of fleece in the State can find a ready market in New York at ninety cents or one dollar a pound, and the average yield is four pounds per head. These animals are well adapted to mountain sections, as they can subsist where sheep would starve.

The Angora Goat Breeder's Association have been at great trouble and expense in obtaining thoroughbred animals for this coast and the result of there labors will soon be made apparant.

We notice the establishment of an enterprise in San Jose which is the commencement, we hope, of an extensive business. The Angora Robe and Glove Company have commenced the work of tanning, drying and manufacturing leather, wools, gloves, robes etc., making mats, carriage robes, armlets, boot tops, collars and many other saleable articles from the skins and fleeces of the Angora. There will never be any lack of market for so valuable a staple as mohair, nor will the business ever be overdone. In a few years the State will be stocked with a class of goats almost pure bred the result of breeding together thoroughbreds and high grades, and the higher the grade becomes the more valuable will be the fleece.

In the late fearful storms in France, 596 sheep were killed at Belle Coste by one flash of lightning. They belonged to a flock of 1,800, the property of a farmer. His loss amounts to 18,000 francs. About 2,000 were thrown down headlong. Two boys were just arriving with the shepherd's bunch, and they set to work with great presence of mind, to disengage the heap of carcases. Many others must have died from suffocation but for this help. Some of the incidents noted are curious. The shepherd had his *sabots* broken, while one of his gaiters was struck off, and has not been found. The man was unhurt, but much shaken. His dog was lying between his legs when the bolt fell; it carried the body twenty yards, and twelve carcases of sheep were found piled above it.

Now is a good time to subscribe.

The Cashmere Goat.—Here it will be in place to say a few words concerning that beautiful and interesting animal, the Cashmere goat, with its fleece like a summer cloud, wavy and long and shinging after a rain, like white-gold satin. William M. Landrum says in his pamphlet on the subject that there are already seventy thousand animals in the State with more or less of this noble blood in their veins. Always hardy and healthy in this climate, clean as a cat, inodorous, never deserting its young like the base Spanish goat, contentedly browsing on chaparral, pine, poison oak, and a hundred things, where even the little merino would die, never so happy as when picking moss off a rock or a decayed log, never getting lost like the stupid sheep, but always cleaving to its fellows and always coming to the corral at night of its own accord, yielding the purest milk of all animals, which is never bitter, no matter what the goat eats, with flesh sweeter than mutton and mohair twice as valuable as wool—this little animal is one of nature's priceless boons to the poor man. It thrives wonderfully on the thinnest, rockiest farms on the foot-hills, where the miners have peeled off the top soil, and, in my opinion, it is destined to be the regenerator of those very regions, otherwise beyond hope. In addition to its beauty and its value, if indulged by its master with a casual handful of grain or salt, it will become greatly attached to him, and distressed when he is out of sight, running and bleating in quest of him.—*Stephen Powers in Atlantic Monthly.*

Wool in Colorado.—A correspondent of the *Economist* writes that wool growing is destined to be one of the heaviest and most important interests in this territory. There is no location in the country better fitted for sheep. The climate is mild, and in most cases the sheep graze the year round. The water is abundant, and the bunch grass in the valleys is very nutritious. Few lambs die in the fields, and there are no diseases among the sheep, and never has been in this territory. While in the southern and western portions of the territory, I saw many large flocks of sheep, numbering thousands. I was surprised at the number of lambs, which seemed to be equal to the sheep. The wool here is very clean and entirely free from briars, burdocks, etc.

One of our exchanges state that samples of wool were on exhibition at the Crystal Palace New York, not long since, for which a premium was awarded. The same beat all competition of the old world. It took Mr. Bicknell three years to produce this wonder, and cost a great deal of pains and labor, braiding the wool and tying it over the sheep's back. The fibres of this wool are probably the longest ever grown before or since, being about three feet in length. It was estimated by good judges that the fleece would weigh from forty to fifty pounds. The fleece was finally sold to a showman and brought the owner the nice little sum of five hundred dollars.

A New Breed of Sheep.—William Crozier, in charge of an extensive farm on Long Island, is endeavoring to establish firmly a new breed of sheep, produced by crossing Cotswolds and Southdowns. He has produced says the *American Agriculturist*, a sheep with a fleece of heavy combing wool, superior in quality and equal in weight with that of the pure Cotswold, and with as good quality of flesh as the Southdown, and one-half greater size.

Lloyd Smith, of San Joaquin county, California, has offered Mrs. Robert Blacom, of Centreville, $1,000 each for three French Merino sheep, which he proposes to take to the Centennial Exhibition of 1876, for competition with the best sheep from all parts of the world.

That Flock of Goats.—We noticed some days ago the passage of a flock 2,500 goats through Napa on their way to Mendocino via Santa Rosa, since which time the Sonoma *Democrat* has gained the following information concerning them:

In the band there was 500 thorough-bred Angoras, that will clip five pounds each on an average, in February, and the proprietors, Messrs. J. W. & E. L. Reed, informed us that they had the Spring clip sold in New York for $1 50 a pound. Among the thorough-breds are five bucks imported from Asia. The Messrs. Reed will take their flock to Pine Mountain, eight miles east of Cloverdale, where they have purchased sufficient pasture land to graze them. This is the largest and finest flock of Angoras on this coast. Mr. Reed informs us that there is a good market for Cashmere wools. Messrs. Reed purchased the band from E. R. Marsh, a banker of San Francisco, and paid $22,000. Mr. Marsh paid for the same band, exclusive of the spring kids, $27,400. There are five thorough-bred Asiatic bucks in tha band, two of which were presented to a Mr. Chenery, of this State, by the Sultan of Turkey; also, eight thorough-bred Cashmere and thirteen Angoras from the celebrated Alexander Blue Grass farm in Kentucky; also, sixty-four full-blooded mannes from the same place—making the most celebrated collection of the kind on this coast, or the United States, quality and quantity considered.—*Napa Register.*

A Cure for Hoof-Ail.—Richard Peters, Jr., Georgia, writes to one of our contemporaries as follows: During the Fall of 1869 we purchased some high priced Merino ewes in Vermont. On their arrival here they inoculated our entire flock with that fell discase, the hoof-ail (Randall). In a flock of 200 Merinos and 100 Angora goats, it had almost full sway for four years, notwithstanding constant and almost daily applications of blue vitriol, sulphuric acid, pine tar, oil, etc., and over $75 worth of crude carbolic acid. Nothing would cure it permanently. We finally thought death would be the best, and last remedy. However, our shepherd suggested nitrate of silver, used in very strong solution. It has proved an effectual cure, and for three months we have seen no sign of the foot rot. We applied by inserting a quill in a cork and wetting all parts of the foot with the caustic solution; then applying a little powdered lowat alum between the feet. Of course the foot must be trimmed, and the remedy applied once each week. Stables should be kept clean and sprinkled with lime. Pastures should be changed until the fall rains wash the pus from the leaves and grass. I hope this remedy will prove as valuable to other sheep breeders as to us. When sheep are infected with hoof-ail, they neither grow fat nor breed well, neither do they shear heavily.

Sheep Killed.—Another singular disaster occurred to a flock of sheep in Washington township recently, by which fifty-three of the animals were killed. The Alameda county *Independent* says the shepherd attempted to drive the flock of about 2,000 in number to a new pasture field in the neighborhood of Mission Peak. The ground in here much broken by gullies and deep ditches, and a portion of the sheep, frightened by some unknown cause, turned back and tried to reach their old pasture. While hurrying helter skelter, one sheep fell into a deep ditch, and before the could be turned several hundred and followed. On extracting them, fifty-three were found to have been killed or so badly injured as to necessitate putting them to death.

At the first meeting of the creditors of the Yuba Plough Company at Boston, October 29 it was decided that the company should continue business. The creditors will either grant an extension or the company will avail itself of the offer of responsible parties to furnish the ready cash needed.

The Vineyard.

Raisin Culture.

W. A. SANDERS, a gentleman who is widely known as the "raisin man," in Fresno county, writes to the *Expositor*, of October 10th, a valuable communication, in which he gives information as to the value of one year's product from one acre of raisins, from which we take the following:

I have in a single instance made forty pounds of raisins from a single vine pruned in the usual manner of vineyard pruning. These raisins sold at a country store, retail for twenty-five cents per pound, or $10 per vine for the year. An acre of land would produce 700 such vines, giving a gross income of $7,000 per acre. But this is a result far above what anybody must expect from raisin production.

An acre of grapes of the Larga, Tokay, Fiher Zagas, or what brother Wells calls the "White Malaga," will produce in our superior climate and from our best soil, with an abundance of water and good culture, on matrue vines, from 10,000, to 40,000 pounds of grapes per annum. Gen. Negley gathered from an acre of six-year-old Reisling vines, at San Jose, 40,000 pounds last year. There is no reason why vineyards in our county should not do as well.

You will observe that I do not use the term "drying." Raisins are cured not dried. Every person who has examined the qualities of raisins has observed that instead of the juice living been merely expelled in the process of curing, that it has been changed to glucose or grape sugar, and that instead of the raisin being but dried fruit-fibre, as is the case with dried apples, plums, peaches, etc., that is almost a solid mass of granulanted sugar. And just in proportion as this change of the juice to sugar is affected with least loss of weight is the grape suitable for making raisins.

The Larga loses 50 per cent. in curing; the Tokay 60 per cent., and other varieties, including Muscats, from 60 to 70 per cent. Or in other words, 1,000 pounds of grapes will make 500 to 750 pounds of raisins, according to the variety of grape used. You will thus observe that the amount of raisins per acre will range from 3,000 pounds of a light crop of Fiher Zagas to 20,000 pounds from a heavy crop of Largas. From this it is easy to determine the amount of cash from an acre.

And right here we wish to have it borne in mind that we are writing about "raisins," not the tough, ill-flavored, hard-seed dried grapes made from Catawbas, Mission, Zinfiadels, Sweetwaters, Hamburgs, or any other wine, table grapes, or trash that happens to be growing on the farm; but *raisins*, fine, large, bright, bloom-covered, plump, luscious, sugary raisins. And for such, when once they become known to the world, we do not think that we are over-estimating the price when we assume that we can only rely upon receiving at least ten cents per pound for them delivered at the railroad. That the sales will amount to from $300 to $2,000 per acre, gold coin. I have data of the positive character which leads me to rely upon clearing $1,000 per acre annually from my vineyard, when in full bearing.

To plough the ground well, construct distributing ditches, furnish the best of cuttings on the ground, and set them in the best possible manner, is worth $30 per acre. The care for the first year, irrigating, etc., would be about the same as for corn—say $10 per acre. Added to this after the first year, is an additional expense for pruning, or a total cost yearly of about $15 per acre. In addition to this there is the cost of picking, curing and packing, which makes a total of about one-half per cent per pound for each pound of cured raisins, not reckoning the cost of boxes, which would be an additional expense, and could be made to amount to much or little, according to the manner in which they are packed.

And now let me use your columns to answer a few questions that are constantly being intruded upon me from my reputation of being the "raisin-man" of the country.

WHY I AM HERE.

1st. Because all the vineyards of our valley can be so arranged as to be flooded. And this, when practiced judiciously, is a sure cure for the phylloxera and other ailments of grape vines.

2d. Because the summer heat here is sufficient when fully utilized by properly constructed drying floors, not only to speedily cure the raisins, but to destroy all insects there may be in the grapes, thus insuring the raisins against injury or loss by insects, and relieving us from the expense of scalding, steaming, or running thorough an Alden dryer, or any other patent process, as they are compelled to do where summers are less hot than in our valley. In this respect we surpass every other part of the State.

3d. Grapes ripen earlier here than elsewhere, and the fall rains are lighter and not so early as in most parts of the State, thus giving us the benefit of a greater amount of heat and greater dryness of atmosphere than is found in other localities, thereby enabling us to cure raisins so as to produce a quality that shall surpass anything that can be produced under less favorable conditions of temperature and dryness of atmosphere.

4th. The railroad, affording easy and speedy transportation to the city; and the prospective canal, which I hope to see built, and which will give us very cheap freight to the to the seaboard by the time our vineyards shall produce more than a local supply and a supply for the mining region east of the mountains.

5th. The superiority of our land for grape production and the ability to raise here oranges lemons, limes, pine-apples, and most other tropical fruits, in conjunction with our vineyards.

QUESTIONS AND ANSWERS.

What is the best soil for grapes? Any of the valley land that is not to sandy, is not alkaline, and has a depth of soil ranging from four to ten or fifteen feet above the hardpan.

Will almonds and alfalfa grow on such lands? Yes, both to perfection.

What can good vineyard land be bought for? From $2 50 per acre up to $20, according to location. But none of it is worth a cent without water.

What is water worth? Whatever the Fresno Canal & Irrigation Company choose to ask for it. They claim all the water of Kings river and their right of ownership has been confirmed by the Courts. They are now selling rights to irrigate 160 acres at from $250 to $500 each, the purchaser to construct his own ditch from their canal, and to pay from $25 to $100 annually for keeping the ditch in repair.

The *American Grocer*, of New York, is doing a great service for the raisin interest of California. Every number of the paper contains some favorable comment, and now if our people will put themselves in a position to supply the demand which is likely to follow the eminent endorsement which our product is receiving, the raisin crop will soon become of more importance to our agriculturists than the cereal now is.

California Dried Fruit.

The following which we take from the *Bulletin* of October 8th, gives a timely hint to the fruit raisers of the State, which we trust they will profit by:

A citizen of this State, largely interested in fruit raising, who has recently returned from New York, says that the inquiry for California dried fruit is on the increase.

The New York fruit market is a very large one. It can probably trade ten times as much dried fruit at a good price as California will be able to produce. But fruit growers here must study the market. Moreover dealers in New York want some assurance that when they sell a lot of California dried fruit, and find that the same pleases their customers, other lots of the same quality can be furnished in a steady way to supply the demand created. Unless that can be done the trade would be injured, and would be quite unsatisfactory. If for instance, a New York dealer were to sell an invoice of California raisins, he wants to know that he can keep right on selling the same. And so of dried peaches and plums. If he sells to-day a brand of Malaga raisins, he knows that he can stalk his store to-morrow with another lot, or with any other kind of dried fruit which is well known in the market.

Now these considerations are of great importance to California fruit-growers. A few odd lots put up in variable packages will never make much impression on the market. The dried fruits of this State are so good that the demand for certain sorts would be without limit, if care is taken to put them into the market in such packages as are provided by the trade.

If a fruit-grower this year could have had fifty acres of Bartlett pears in full bearing, and fifty acres more of apricots for drying, he could not have asked for a better thing. He could have shipped all his pears or sold them on the trees to others at round prices. His apricots, which could be sun dried at small cost and little trouble, would have brought very large prices in the Eastern markets. These may serve as hints of the direction in which fruit-growers may hereafter find profitable ventures.

Hay and Grain.

GRAIN CULTURE IN CALIFORNIA.

ALTHOUGH grain growing as conducted in California, is too often a hap-hazard business, it has nevertheless been reduced to a system in some localities, upon a paying basis. The best grain growers are not always the largest, in fact they are usually farmers who believe in and practice a diversified system of farming, at least to the extent of rotating from grain to hay and pasturage, with occasional summer fallowing, governed of course by local conditions of soil and climate. Many portions of the Santa Clara Valley crops can be grown every season without fallowing. Cropping to hay and pasturage occasionally, is more economical and every bit as good to clear the land of foul stuff and insure a good crop of grain the following season. On some of the rich soils in the interior valleys, a different system is necessary. The soil must be left fallow every other year, to be sure of bringing a crop worth harvesting. On an average the earliest sown grain is the best throughout the State, but even in this there are exceptions. On our rich moist soils, early sown grain will lodge before ripening and rust badly. Spring sowing on such soil is best, excepting in very dry seasons. The prudent farmer on such soils will always sow some grain early, and make hay if the season is unfavorable for grain, and sow a portion of his farm later, that he may have a crop of grain if the season is a wet one, or make hay and pasture if it turns to be a dry season. There are many little things that farmers in different localities have learned by hard experience about grain growing in their particular localities that is incalculable to them. Grain growing is but one branch of farming to be sure, and it is generally thought that a man does not need much experience or thought to sow and reap. But it is an important item in this State to grow a good crop of grain or hay, and probably as much hard work is needed to be successful in this one year with another, as at any other branch of farm industry. So far we have only referred to growing grain without artificial irrigation, where more or less guess work has to be done. With any system of irrigation, where the soil can be supplied with moisture to produce sure crop, less close calculation has to be done. But even then the cultivation of the soil is an important matter. We believe that for grain Winter irrigation is the best always. As to cultivation, our grain growers are very generally of the opinion that thorough—not deep cultivation is the best upon almost any soil.

In a recent article in the London *Times*, Mr. James Caird, after showing that the British harvest of 1874 is deficient, gives some figures showing the effect in Great Britain of a plentiful harvest in 1874: The benefit to consumers in this country of a good harvest, can now be definitely stated by the realized result of that of 1875. This is the only country in which foreign corn can always meet with a market, and in a year such as the past, the abundance of all foreign countries found this the only outlet. The weight of foreign corn of every kind imported during the last two harvest years has varied extremely little, being in round numbers 4,500,000 tons and 4,600,000 tons respectively. The cost of this in 1873-4 was £54,000,000, and in 1874-5, £45,000,000; the larger supply of the past year thus costing about 9,000,000 less than the somewhat smaller import of the previous year. To this difference must be added a considerable saving both in the quantity and price of foreign potatoes imported. When we add the saving in the cost of the home supply corn, the total gain to the British consumers from the fine harvest of 1874 can not have been less than £20,000,000.

Bermuda Grass Hay.—We have frequently been asked writes our *Home Journal* whether Bermuda grass, (so much esteemed for pasture and lawn), can also be made into good hay; and we have always answered, that where the soil is rich enough to produce a rank and heavy growth, there can be no question of the value of this grass for hay and forage. In corroboration of our views, we find the following suggestive item in a late number of the Atlanta, (Ga.) *Constitution:* One of the largest farmers of Greene county, Ga., Dr. Waldemar Moody, is devoting his entire attention to native grasses and stock-raising. He has seventy head of cattle, and the first cutting of his Bermuda grass crop yielded 125 tons of excellent hay. He expects to gather fifty tons more. This crop was secured at little expense. The doctor is very well satisfied with his abandonment of cotton culture. He does not propose to return to it. Grass and stock-raising pay better. A few such men in every county would happily revolutionize our agriculture.

The Wheat Crop of 1875.

Everybody knows that times are hard and that business of all kinds is dull. On the whole the farmers have had the best of it for a year or two past.

The general good condition of our wheat crop is an important element in the calculation as to the probabilities of the future, and that gives some encouragement to look for better times. We shall have a surplus to export and the world will certainly want all it can spare. According to Mr. Alexander Delmar the average requirement, supply, and deficit for many years past in the different European countries are shown in the following table, in which the foreign weights and measurements are reduced to bushels:

Country.	Requirem't.	Supply.	Deficit or Surplus.
United K'gdom	180,000,000	95,000,000	85,000,000
France.....	295,000,000	277,000,000	18,000,000
Austria.....	88,000,000	106,000,000	18,000,000
Russia.....	150,000,000	212,000,000	62,000,000
Germany.....	120,000,000	120,000,000	...
Roumania ...	15,000,000	30,000,000	15,000,000
Totals ...	858,000,000	840,000,000	18,000,000

The table shows an average deficit in the European wheat crop of 18,000,000 bushels, which has been made up by importations. For 1875-6, however, the deficit is estimated at 49,000,000 bushels, a careful estimate given the following table:

Country.	Requirem't.	Supply.	Deficit or Surplus.
United K'gdom	188,000,000	81,000,000	107,000,000
France.....	277,000,000	272,000,000	5,000,000
Austria.....	92,000,000	89,000,000	3,000,000
Russia.....	155,000,000	215,000,000	60,000,000
Germany.....	125,000,000	115,000,000	10,000,000
Roumania....	15,000,000	25,000,000	10,000,000
Totals ...	852,000,000	803,000,000	49,000,000

To meet this deficiency we have a surplus of about 65,000,000 bushels, the total crop being 265,000,000 and the home supply 200,000,000. At an average of 70 cents per bushel for the producer, this would amount to $45,000,000.

These figures show that the raising of wheat for export is a very dangerous speculation, and that while in some cases it may pay, the chances are that it will not. The slender average deficit of 18,000,000 bushels in Europe may at any season be turned into a surplus.—*New England Farmer.*

The Sacramento Beet Sugar Company. The *Record-Union* of October 30th has the following in regard to one of Sacramento's enterprises: "The Sacramento Valley Beet Sugar Company have about completed their manufacture for the year, the result being about 300,000 pounds obtained from about 3,000 tons of beets. The ground planted this year yielded four and a half tons to the acre; the beets 11½ per cent. of sugar. At Davisville the beets lacked moisture, and were burnt up by the sun. The cost of transportation from that point was $5 per ton. The company have secured 1,400 acres on the Cosumnes, near McConnell's, and 200 acres of American river bottom for the operations of next year. No more will be planted at Davisville. The plowing will commence as soon as possible, say about January, if the rains prove propitious. A dividend will be declared this year for the first time since the establishment of the factory."

A New Fodder.—We want new grasses in California now that irrigation is beginning to interest us. They are now introducing into Great Britain what is called the prickly comfry, a native grass of the Caucasus. It yields in several cuttings thirty tons to the acre, the grass is propagated from the roots and is perennial. Cattle eat it readily and thrive upon it. There is reason to believe that it will suit our climate.—*Southern California.*

Short Crops East.

The agricultural returns says the San Francisco *Bulletin* received at the Washington Bureau up to October 1st, shows a great shortage in the wheat crop of this year. The quantity in bushels is but 80 per cent. of the crop of 1874, and the quality is 14 per cent. "below a sound condition." We do not know whether this reckoning includes California and Oregon. If it does then the shortage for the whole country foots up 62,000,000 in quantity, and other millions in quality, and ought to have the effect of advancing prices in Liverpool. For the year ending June 30, 1874, the United States exported wheat to all countries to the amount of 71,039,928 bushels; to England, 60,551,181 bushels. This, of course, was the harvest of 1873, which was a heavy one. The British imports for that year from all other countries were not nearly equal to those from the United States, and the average price for the year ending September, 1874, was $1 84 per bushel. With a shortage as to quantity and quality of not less than 80,000,000 bushels in the United States this year, prices in Liverpool are likely to rule higher than they are now before the opening of Spring, notwithstanding the considerable supply of old wheat on hand. The barley crop is rated 13 per cent. and the corn crop 4 per cent. short of last year's production. Oats is the only cereal crop that shows an increase. The agricultural returns for October show that the wheat crop the present year is a short one, and there is a marked depreciation in the quality. The average thus far reported is 80 per cent. of last year's production. If this indicates the total depreciation, it amounts to nearly 62,000,000 bushels and gives the crop at 246,000,000 bushels. In quality the crop averages 14 per cent. below a sound condition.

Apiary.

Pacific Coast Bee-Notes, From American Bee Journal for November.

In answer to questions, we report as follows: 1. No surplus honey. Increased from 78 to 101 swarms.

2. There is no prospect for surplus honey; but enough to keep busy during the winter for their own consumption.

3. White sage, buckbush or berberry, sumach.

4. White sage blooms in April. The berberry blooms several times during the Summer. It is now in blossom in our canon for the fourth time since April. Sumach generally begins with August and lasts a month or more. Our ranch is within the frost-stricken belt (frost of April 5th), which accounts for the poor return. Brune & Bruck.

Los Angeles, Cal., Sept. 17, 1875.

1. Very good. Hives that did not swarm gave me one hundred pounds box honey. My stock hives all gave two swarms each, and some of them gave three.

2. No more surplus honey this season: my bees being kept in the city, I have not the benefit of buckwheat.

3. Dandelion, fruit and white clover.

4. Dandelion blooms April 11th; fruit blooms about the last of April; white clover blooms May 10th, and continues until about August 1st. Thos. Brassel.

Portland, Oregon, Sept. 18, 1875.

In compliance with your request under special; 1. We have had but few swarms, and from 200 hives we have taken only 32 pounds of honey.

2. We only expect to divide and make swarms.

3. Mountain clover, white sage and buckwheat are the three best honey-plants. Mountain clover begins to bloom the last of March and continues till the middle of May. White sage begins May 1st and continues until July. Buckwheat begins about June 1st and continues till the last of October.

Geo. B. Wallace.

San Bernadino, Cal., Sept. 18, 1875.

Pasturage for Bees.

With the exception of an occasional gathering from honey-dew, bees gather the whole of their honey from flowers, and consequently where there are no flowers they cannot thrive. But the term flowers must be taken in a broader sense than meaning such as we cultivate for garden ornaments or home decoration. The inconspicuous blossoms of many trees, the wee modest wild flower, scarcely noticed by passers by, furnish abundant pasturage for bees. Many persons who have lived in the country all their lives, are scarcely aware that our noblest forest trees have flowers at all, but from the brave old oak and the wide spreading beech, bees gather many a pound of honey. An avenue of limes or sycamores, a field of beans or white clover, form a very El Dorado for the busy bees, their pleasant hum on the snowy hawthorn or the sweet-smelling sallow, (palm, as it is commonly called) is very noticeable when nature is awakening from the gloomy sleep of winter, and our thoughts and feelings are glad with the prospect of returning summer. Where large heaths abound the bees have a second harvest, and it is a common practice in such localities for bee-keepers to send their hives to the moors for about two months, the trouble and cost being amply repaid by the immense weight of honey brought home, which the common heather yields freely during August and September.

In Scotland and on the Continent cartloads of hives may be seen traveling to and from the heather. Often they are looked after on the spot by some resident cottager who receives a gratuity of 1 s. per hive from the proprietors of the stocks. In the South of England this practice is not pursued, although I do not see why it should not be in many places, there being miles of heather equally available as in Scotland. On the Nile there are bee-barges which travel only at night, stopping in the day-time at any place that affords abundant pasturage for bees, and we read in *Pliny* that this was likewise the practice in Italy in his time. "As soon," says he, "as the Spring food for bees has failed in the valleys near our towns, the hives of bees are put into boats and carried up against the stream of the river in the night in search of better pasturage. The bees go out in the morning in quest of provisions, and return regularly to their hives in the boats with the stores they have collected. This method is continued till the sinking of the boats to a certain depth in the water shows that the hives are sufficiently full, and they are then carried back to their former homes, where the honey is taken out of them." And this is still the practice of the Italians who live near the banks of the Po, the river which Pliny instanced particularly in the above-quoted passage. It was the advice of Celsus that after the vernal pastures were consumed, the bees should be transported to places abounding in Autumnal flowers, as was done by conveying the bees from Achosia to Attica, from Eubœa and the Cyclad Islands to Scyrus, and also in Sicily, where they were brought to Hybla from other parts of the island. What portion of our fertile land does not afford sustenance for bees? Mr. Alfred Neighbor, in his work, "The Apiary," devotes a chapter to Bee-keeping in London. Could we ever imagine a more unpromising field for honey-gathering? London! Foggy, smoky London! But think a moment. London has parks, squares, gardens, and each of these has trees, flowers and shrubs. What matter if the flowers be dirty—their nectaries secrete the coveted sweet, and the natural filter of the bees will clarify it better than any artificial one could do. Only last year a lady living in Kensington told me she kept bees there. They throve well and had furnished her with a super of fourteen pounds weight. It has been asserted that bees will fly five or six miles for honey, if a supply nearer home be not attainable. They may, but such an extreme labor would not allow the stock to thrive. Too much time and muscular strength would be consumed in making the journey. The great danger to bees is their liability to be tempted into shops, such as grocers, confectioners, etc., where they get bewildered, fly to the window, and in a vain attempt to penetrate the glass, they die. Breweries are also fatal places, the sweet work attracting numbers which perish by drowning.

Most bee-keepers have a garden, and in it can be grown many flowers pleasing to the eye, grateful to the nose and useful to the bees.

Mignonette, borage, honeysuckle, hyacinth, crocus, laurustinus, lavender, lily, primrose and many other flowers are visited by bees, and may well be cultivated with advantage. The arable fields supply buckwheat, beans, mustard, clover and lucerne, which all give an abundant supply of honey; and if we follow America's example, we should sow, when possible, special bee flowers.

Borage has the reputation of being the best of all bee flowers. It blossoms continually from June till November, and is frequented by bees even in moist weather. The honey from it is of superior quality, and an acre would support a large number of stocks. Jewelers in the country cannot fail to have observed occasionally, that the leaves of the trees and shrubs have a gummy appearance and are sticky to the touch. If a leaf so covered be put to the tongue it will taste sweet. This is honey-dew, and is a secretion of some species of aphides, ejected from their abdomen in little squirting streams.

This substance the bees readily gather, and when it is abundant make large additions to their stores. It is generally most plentiful in June or July, and is chiefly found on forest and fruit trees, although often on low-growing bushes. At the season of its greatest abundance, the pleasant hum of the bees engaged on it is very audible.—*Manual of Bee-Keeping by John Hunter.*

How they Value Manure in Italy.

When driving out of Rome one day in an open carriage, the driver paused for a few moments at the outer edge of the city. Immediately opposite me on the left side there were two women with white aprons on a piazza, and in front of a house adjoining this several men were at work. Suddenly the younger of the two women came running to the carriage, as I supposed probably to speak to the driver before he started again. She, however, got down on her knees, extended her apron forward on the ground, and with her hands rapidly drew into it, fresh and clean as it was, a pile of manure just dropped. As soon as she had scraped in every particle of it, she gathered up the edges of the apron and went back with the load. I heard a laugh among the men, and on looking towards them, I saw one of them who had a bucket and shovel in his hand, and who had started to secure the manure. The time he lost in getting hold of his utensils enabled the woman, who was already equipped, to carry off the prize, and the laugh was wholly at his expenses.

I had a momentary feeling of surprise, but on reflection said, "this will pay." It would not, perhaps, require more than ten minutes of labor to restore the hands and the apron to a condition of cleanliness, while the article secured might be a dinner worth of vegetables for several persons.—*Travels in Italy.*

A Montana paper says: "M. Stone, living near Gaffney, cut this season 100 acres of wheat, some of which yielded fifty bushels to the acre. And yet people trudge off to California simply to raise wheat.

EXCHANGE NOTICES.

There are so many Agricultural papers of merit in the United States, that to give extended notices of them and their peculiar excellences, would require too much space. We will continue our list from month to month. Our readers can obtain sample copies of either of them by writing to the publishers, giving your address and enclosing a stamp to prepay postage.

We will remark right here, that sending a postal card to a publisher for a sample copy, is imposing on good nature. Publishers must prepay postage. They are willing to send a paper to any one who wishes to examine it, but are not generally so generous as to furnish postage stamps to strangers. Some publishers advertise that they will pay no attention to postal cards.

Commencing with the publications of the West:

Central Union Agriculturist

Is a semi-monthly, 8-page paper, the only agricultural paper in Nebraska, and published by Geo. Brewster, at $1 60 a year. Specimen copies, 10 cents.

The Kansas Farmer

Is a weekly, only agricultural paper in Kansas. Published at Topeka.

The Missouri Farmer

Is a weekly published at Booneville, Mo.

Coleman's Rural World

Is a weekly publication, by Norman Coleman, St. Louis, and is one of the most valuable papers on our exchange list. $2 10 a year.

The Journal of Agriculture

Formerly a monthly, now a weekly, is also an excellent paper, published at St. Louis, Mo.

Our Home Journal and Rural Southland

Is one of our favorites, published weekly at New Orleans, La., at $2 65 a year. We always find something in our Southern exchanges applicable to California farming.

The Rural Sun

Is an excellent Southern paper, published at Nashville, Tenn., at $2 50 a year.

The Rural Carolinian

Is a monthly publication, neatly gotten up in pamphlet form, at $2 00 a year. Published at Charleston, South Carolina. Send 20 cents for a sample copy.

The New England Farmer

Boston, Mass., is an excellent weekly, $2 50 a year. We can say the same of the

Massachusetts Ploughman,

Boston, Mass., $2 50. We should think that these two papers would join forces. But this is their matter, not ours; however, they are both valuable papers.

New York produces only about twenty-five agricultural papers.

State Agricultural Journal

North Carolina produces the State Agricultural Journal, a neat weekly at $2 00. Published at Raleigh, N. C.

The Rural Messenger

Petersburg, Va., weekly, $2 00 a year.

The American Farmer

Is another neat Southern monthly, published at Baltimore, Md., at $1 50 a year. 15 cents will obtain a single copy.

☞ *Enright's Foundry.*—Mr. Enright is now at work on quite a number of Straw-Burner thresher engines. He expects a big sale this coming season, as his engines give such splendid satisfaction wherever tried. We expect to see San Jose one of the leading manufacturing centres for agricultural machinery before many years.

☞ *Bergstrom Plows.*—We think that parties wishing to purchase good plows would do well to examine the Bergstrom plows on St. John street. (See advertisement.) These plows are made of superior steel with iron core, so as to give great strength and admit of case-hardened surface that dirt will not stick to and that will wear. We are sure they deserve notice.

☞ The National Gold Medal was awarded to Bradley & Rulofson for the best Photographs in the United States, and the Vienna medal for the best in the world.
429 Mantgomery street, San Francisco.

☞ *Good Work* is deserving of credit. Drs. Menefee & Gaston, dentists, San Jose, have lately done some excellent plate-work, difficult to fit, for the editor. In this age of imperfections, when Nature seems inadequate to provide substantial teeth for everybody, a perfect dentist is a perfect blessing. Good health demands sound, clean teeth, and for comfort alone it pays to keep the mill in one's head in good griudiug condition. This is our experience.

☞ *San Jose Foundry.*—This establishment, managed by Mr. McKinzey, proprietor, is turning out a good deal of agricultural machinery, and every year does more at it. We notice there the Harris Tubular Harrow, two kinds of excellent gang-plows of recent invention, an improved seed-sower, a new grain-cleaner for seed-wheat, etc., and the Pelton horse-powers. Mr. H. Mitchell, the foreman, informs us that they will soon enter more largely into the manufacture of improved farming implements, including threshers, engines, etc.

☞ From Bradley & Rulofson, leading photographers, San Francisco, we acknowledge the receipt of a handsomely finished photograph of the Palace hotel, including the opposite corners, also handsome models of architecture, one of which is designed for the business of these photographers, who will take their new stand on Market street, in the very heart of the business of the city. Attached to the card is a description of the hotel itself, by Professor Knowlton.

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Farmers of Small Means

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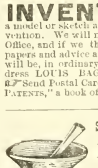

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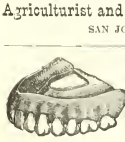

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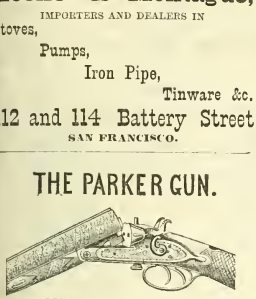

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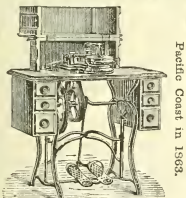

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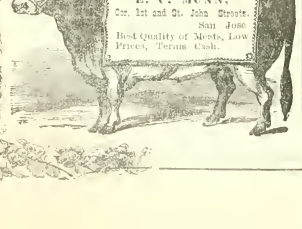

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DECEMBER.

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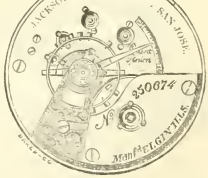

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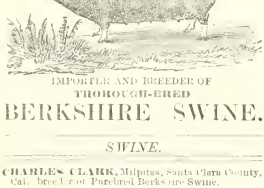

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Contraction of the HOOF, and all LAMENESS resulting from Unsound Feet.

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A. O. HOOKER,
Late Gunckel & Hooker.

L. FINIGAN,
Late of Marysville

HOOKER & FINIGAN,
DENTISTS.

OFFICE,
359
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San Jose.

The California Agriculturist

AND

LIVE STOCK JOURNAL.

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DAMPNESS INSIDE OF DWELLINGS AND HOW TO OBVIATE IT.

A lady subscriber writes that the recent wet spell of weather, although good for farming out-of-doors, has been rough on housewives who have large washings to do, and that the damp has accumulated in sleeping-rooms so that the walls are mouldy and even the bedding is damp. She wishes to know how to remedy this, or rather, how to prevent it.

In reply we will say that much of the dampness complained of has probably come from the tea-kettle and other vessels that are allowed to steam upon the stove in the kitchen. The steam does not condense upon the walls of the kitchen, because the ceiling is warmed in that room; but it escapes from the kitchen through doors into other rooms that are cold, and whatever the particles of steam and moisture from off the stove comes in contact with in cold rooms it condenses upon them, so that the walls, furniture, bedding, etc., all accumulate moisture by condensation in this way. Another thing we will call attention to in this connection — whatever is boiling upon the stove, be it ham, cabbage, onions, corned beef or other food, if the doors leading from the kitchen to other parts of the house are open, the scents are carried with the steam and deposited upon whatever is cold enough to condense the steam. This is why some houses are filled with a smell "peculiar to the family," as all the clothes catch a share of it and carry it, too.

Our advice in this case is, first, whenever any vessel is steaming on the stove, shut the doors that connect with other rooms and open window or outside door of the kitchen to allow the steam to escape. Don't allow steaming upon the stove excepting when necessary to do cooking, washing, etc. When there is nothing steaming upon the stove and a clear, dry heat alone is generated, then open the other door and allow the dry heat to circulate through the rooms. At other times it is well, in fact necessary, to open windows and air the rooms thoroughly. The best time to do this in Winter is usually after ten o'clock in the morning, when the air is the dryest and a breeze has sprung up which is drying. With a little studious care no room or article in the house need to get moist or musty. It is only necessary to understand the philosophy of the thing, ventilate thoroughly at suitabl times, use the dry heat from stoves and fireplaces whenever it is convenient, and be careful to observe and enforce such rules as are in accordance with reason.

Quicklime and wood ashes, made into a whitewash, will destroy the moss on old hide-bound tree. Try it. Lo not use it with much potash on smooth-barked or young trees, as there is danger of injuring them.

FINANCIAL.

Dr. Scott's article on the "Danger of Borrowing," in this issue, is worth reading and pondering upon. It is certainly better for us all to get down as near first principles as we can, and "go slow," as the saying is. In other words, depend upon self more, and make industry and close application to business within our means the method of acquiring means with which to branch out, and grow like the oak—slowly but surely.

As the year draws to a close, it is a fit time to take a retrospective glance at the prospects and realizations of the past, and pondering upon the lesson, determine the best course to pursue in the future. If our mistakes have led us into difficulties, let us not be cast down, but arise superior to them and do better next time, or try to, at any rate. Those who have lost by borrowing should in a great measure blame themselves, although the present financial system is certainly oppressive upon industry and ought to be revolutionized. Bankers, like men in other speculative trades, naturally try to take advantage of the market, and even will control it, if they can, to their own advantage. To be sure they are to blame for tightening up their purse-strings, advancing interest rates and foreclosing upon a man who has a show to save himself; but until a better financial system prevails, what else can we expect of coin-hardened, case-hardened men? A better financial system! How is that to come about? Who is to give it to us, and what will it be? These are questions that interest us all, and upon which there is self-interest of the money-power upon one side, and the poor, divided-in-opinion common people on the other side. Who, indeed, will give us a better system, and how? Not the bankers, you may depend; not those whose interests are with the banks. Like every great reform that ever gained sway, the *people must be the ones to move and to give it to themselves*, in spite of all opposition. This means revolution—peaceable if we can, forcible if we must. An honest system must spring from an honest people. An intelligent system must be the progeny of an intelligent people.

The honesty and the intelligence are both sadly lacking; still there is hope that our people will soon be prepared for a grand reform in this direction.

The Trapper.

We have received a copy of the Amateur Trapper and Trap-Makers' Guide, which is a complete and carefully prepared treatise on the art of trapping, snaring and netting, containing a great deal of useful information. Written by Stanley Harding and published by Dick & Fitzgerald, 18 Ann street, New York. Just the book for the boys. Price only 50 cents. Send for one.

The Next Number comences a new volumn with improvements. Subscribe now.

Many subscribers to this journal have expressed satisfaction at and approval of our admitting none but worthy business advertisements in the California Agriculturist. It ever has been and will continue to be our aim to conduct our monthly strictly in the best interests of its readers, guarding its columns against the intrusion of anything that is not honorable and worthy of attention.

We feel that the trust reposed in or accepted from us is a sacred one, and purpose to so conduct the paper that none who are well-meaning can take exceptions to it, while all who love and respect the right shall be pleased to continue to be its readers and our friends.

Ramie and Jute.

Of these products the Commissioner of Agriculture says;

"There is, perhaps, no one subject of agricultural production in which I have taken more interest than that which relates to fibrous plants, especially ramie and jute. These have been brought into notice within the last four years through the influence of this department, and now they are about to assume an importance which is only beginning to be known. Both these plants will grow successfully in all our Southern States, and especially in California. The impediment heretofore to their production has been the difficulty of separating the fibre from the gummy principle and green covering of the plants. But this problem, it is believed, has been now solved by the invention of machinery, which, with the aid of certain acids, separates the fiber perfectly and economically. The ramie is a native of India and China, where the work of separating the fiber is done by hand at a cost of $150 per ton. The latest patentee of a machine for separating the fiber claims that the cost of separating it will not exceed $30 per ton. It is a beautiful and lustrous staple, in strength and brilliancy almost equal to silk; in fact, most of the dress goods made to imitate silk fabrics are made in part of ramie, and its value now in England is £75, or $375 per ton; and it is said that in California 1,200 ponnds of this fiber may be produced on one acre. If these anticipations be realized, of which there is now a reasonable hops, the country may anticipate the prosecution of a new, useful and profitable industry. Jute produces a fiber of a coarser quality, but admirably adapted to cordage and bagging, and because of its length and strength, greatly superior to either flax or hemp."

List of New Advertisements.

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Flower and Vegetable Garden, J. Vick, Rochester, N. Y.
Periodicals—Harper Brothers, New York.
Christian Worker—Tubery & Co., San Francisco.
Garden Seeds—J. J. H. Gregory, Mass.
Sale of Clydesdale Stallions—T. G. Duncan, McLean, Illinois.

California AGRICULTURIST AND Live Stock Journal.
CAL. AGRICULTURIST PUBLISHING CO.,
S. HARRIS HERRING, Editor

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☞ We are determined to adhere to to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

Our Patrons will please bear in mind that renewals and remittances are now in order and that we, on our part will be pleased to credit the same on their accounts, sending to them receipts for the amount. We send statements of account to many of our subscribers this month. These are not in all cases duns, but are statements of each subscribers standing upon our books, that all may see how they do stand, whether paid up fully or not. Of course we expect, what every honest man will admit to be right, pay for the JOURNAL, when our good subscribers feel ready to remit. A few of them are always prompt, many are rather slow, and several are sadly delinquent, while occasionally one never intends to pay and after awhile stops the paper without paying. The sooner the latter class stop the better for us. But we are always willing to wait a convenient length of time on any well intentioned person for his or her subscription. And we are also willing to send to any one wishing to take the AGRICULTURIST on trial, *three months free*. Every subscriber, old or new that pays one year in advance, will be entitled to a premium and it will be credited to his account until he chooses from our list what it shall be.

Peas sown before the first rains are some of them in blossom. The frosts of winter will be sure to check that proclivity, and although they will grow all winter, they will not be likely to bear before March, unless this is an exceptional winter. Frosts may soon be expected that will singe tender things generally and stop all lavish growth of green plants till the warm days of February.

Country Gentleman is a term that has been applied East to a class of farmers, who having acquired wealth in some business operations, have country seats and farms as well as city residences. In this State, and particularly in Santa Clara valley, quite a number of farmers with their families reside in town a portion of the season—generally during winter months, where the children can have the best educational advantages, and the family can attend lectures, and enjoy all the benefits that an advanced civilizatinn can give. It matters not whether one is rich or poor—whether they can own the house they occupy or not, we rather like the plan. While the boys and girls are attending the institutes, it is perhaps a matter of economy for the family to live in town. Then in spring and summer all can go back to the farm, and work together for natural education and means, as they did in town for knowledge of books and ideas. We like the idea of the family keeping together. The old folks need city advantages as well as the young, and it is nice for the father and mother to enter into society with their children, assist them in their studies and sports, and enjoy with them as many plivileges as possible. As civilization progresses we expect to see more of this co-operative country and city life. The old folks and the young folks need it mutually.

We are glad to learn that there is some redress for the farmer or gardener who is imposed upon by dealers selling poor seed. There has been much complaint, and with reason, on this coast, that it is almost impossible to get good seed from dealers. It should be made to the interest of dealers to sell none but reliable seeds, and a little "justice" might bring them to an appreciation of that fact. The *Rural New Yorker* says: "A decision has just been made in the Court of Common Pleas in New York City which is of great importance to seedsmen, farmers and gardeners. In the case of Van Wyck vs. Allen, Judge Robinson has fixed the rule regulating the damages to which a seedsman is liable for selling inferior seed. He held that the plaintiff was entitled to as much damages as he might reasonably have expected from the crop of the kind of vegetable the seed of which he supposed he was buying; less, however, the cost of the care and trouble he expended after he discovered the crop was not of the kind he had a right to expect."

The Season so far has been a remarkable one. The copious rains of November came dribbling along so as to thoroughly saturate the soil without causing floods. Since the grass first started in October, it had grown without hindrance, and in the second week in December is a half-knee high. With a straw stack to run to, cattle will not only live, but on the fresh feed keep in good order all winter. The thorough winter soaking of the soil has insured good crops of grain and hay the coming season. There has been no frost at this writing to kill tomato plants or squash vines. Many deciduous trees have not cast their foliage. Tender plants are in blossom and the warm sun after the rains is like spring.

Orange Culture is no longer considered an experiment in all the lower valleys of California, and in the mountains below three thousand feet altitude in many localities the orange will do finely. It is the opinion of many good judges that finer flavored oranges can be grown here than at Los Angeles. Be that as it may, it is certain that orange trees will grow finely here, and the fruit will also compare favorably with the oranges of any other country. The trees are ornamental evergreens, and more attention should be paid to their culture.. Young trees should be sheltered from frosts. Although the frost is not likely to kill, it will injure them. A good way to shelter them is to stick three or four stakes around them and tie the top ends together, allowing a little space above the tree. Then sacking or straw could be drawn and tied about these stakes, making a sort of wigwam shelter that would exclude frosts and preserve the foliage and tender tops from injury until after the frosty season is over. Large trees do not need such shelter.

Cherry Trees in an Apple Orchard—Mr. Charles Caine, an old orchardist, of San Jose, two years ago planted cherry trees among full-grown Newton Pippin apple trees in an orchard. The apple trees were standing about eighteen feet apart, close enough one would think, but Mr. Caine planted two-year old, cherry trees between the trees in every row. The result so far is a splendid growth of the cherry trees, which are much more stalky and vigorous than those planted in open ground. The apple trees bear quite as well as before, and promise to bear as well for years to come. This innovation bids fair to prove a grand success. We have long been in favor of closer planting than most any other party, but Mr. Caine pegs a hole ahead of us in this instance. We will watch his experiments and results from year to year. Mr. Caine cultivates his orchard very thoroughly and feels satisfied that he will reap a double profit from it soon.

The Whiskey Frauds that have been unearthed lately show that our liquor men, who claim that they support the Government by paying licenses and taxes, are quite as corrupt as patriotic. They seem to be inspired with some of their own alcoholic spirit—the spirit of the Devil. Their business is to get all the money they can without giving in return what is of value to the human race, directly or indirectly. Defrauding the Government is the least of their sins. It would be cheaper in the end to support them all in luxury, without their doing other evil, than to do it, as is now the case, at a double expense—expense of money, and of the moral sense, health, happiness and lives of thousands annually. What better can we expect than fraud from a class of men whose avocations are calculated to spread ruin and desolation over the land.

NEAR to any great supply of manure from livery stables and other city sources, the soil can be compensated, and, indeed, be forced to such a degree of fruitfulness, that it is not of the least consequence how frequently crops of the most exhausting characteristics succeed each other.

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☞ To any little boy or girl who will send a new subscription, we will send both "The Birds" and "The Chicks," postpaid. Our Childrens' Department the coming year will be a feature in the AGRICULTURIST.

Poetry.

Autumn of Life.

FLING down the faded blossoms of the Spring,
Nor clasp the roses with regretful hand;
The joy of Summer is a vanished thing;
Let it depart, and learn to understand
The gladness of great calm—the Autumn's rest,
The peace—of human joys the latest and the best!

Ah! I remember how in early days
The primrose and the wild-flower grew beside
My tangled forest paths, whose devious ways
Filled me with joys of mysteries untried,
And terror that was more than half delight,
And sense of budding life, and longings infinite.

And now I remember how, in Life's hot noon,
Around my path the lavish roses shed
Color and fragrance, and the air of June
Breathed rupture—now these Summer days are fled;
Days of sweet peril, when the serpent lay
Lurked in every turn of life's enchanted way.

The light of Spring, the Summer glow, are o'er,
And I rejoice in knowing that for me
The woodbine and the roses bloom no more,
The tender green is gone from field and tree;
Brown barren sprays stand clear against the blue,
And leaves fall fast, and let the truthful sunlight through.

For me the hooded herbs of Autumn grow,
Square-stemmed and sober, mint and sage,
Horehound and balm—such plants as healers know;
And the decline of life's long pilgrimage
Is soft and sweet with marjoram and thyme,
Bright with pure evening dew, not serpent's glittering slime.

And round my path the aromatic air
Breathes health and perfume, and the turfy ground
Is soft for weary feet, and smooth and fair
With little thornless blossoms that abound
In safe dry places, where the mountain side
Lies to the setting sun, and no ill beast can hide.

What is there to regret? Why should I mourn
To leave the forest and the marsh behind,
Or towards the rank, low meadows sadly turn?
Since here another loneliness I find,
Safer and not less beautiful—and blest
With glimpses, faint and far, of the long-wished-for Rest.

And so I drop the roses from my hand,
And let the thorn-pricks heal, and take my way
Down hill, across a fair and peaceful land
Lapped in the golden calm of dying day;
Glad that the night is near, and glad to know
That, rough or smooth the way, I have not far to go.

Nature's Nobleman.

Away with false fashion, so calm and so chill,
Where pleasure itself cannot please;
Away with cold breedings that faithlessly still
Affects to be quite at its ease;
For the deepest in feeling is highest in rank,
The freest is first in the band,
And nature's own Nobleman, friendly and frank
Is a man with his heart in his hand.

Fearless in honesty, gentle, yet just,
He warmly can love, and can hate,
Nor will he bow down with his face in the dust
To Fashion's intolerant state:
For best in good-breeding and highest in rank,
Though lowly or poor in the land,
Is nature's own Nobleman, friendly and frank—
The man with his heart in his hand.

His fashion is passion sincere and intense,
His impulses simple and true,
'Tis tempered by judgment and taught by good sense,
And cordial with me and with you;
For the finest in manners as highest in rank,
It is you, me, or you, man, who stand
Nature's own Nobleman, friendly and frank—
A man with his heart in his hand!

Out From the River.

Close her eyes tenderly, do not despise her—
Gone is the spirit for judgment above;
She was destitute—none to advise her,
She was so beautiful—true to her love.

Homeless and penniless, he who adored her
Stricken in youth by the cold hand of death;
Gone was all comfort the world could afford her;
Soon she grew weary, and sickened to death.

She was a stranger to shame, but the tempter
Plied her poor soul with his subtlest arts,
Bravely she conquered—but God will exempt her.
Some said that she with dishonor had part.

It was false; but the slanders filled her with sadness
Pointed the finger of scorn at her head!
She in wild agnoy, driven to madness,
Rushed to the river; and here she lies dead.

Close her eyes tenderly, thou who art wiser,
Peacefully fold the poor hands on her breast;
Do not be merciless, do not despise her,
Pity her loneliness—lay her to rest.

The Apple Bee.

Twenty years and three! Ah me! Twenty years and three.
And there we sit—a basket of apples on my knee;
Busy fingers pare and slice, but busy thoughts will go
Back to a happy, blissful time, twenty-three y'rs ago.

The scent of the fragrant apple, the scraping sound of the knife
Take me back o'er a lapse of time to a scene in earlier life;
Take me back to a country home, a home I no more may know.
Back to a rustic apple-bee, twenty-three y'rs ago.

Back to a farmer's kitchen, in Autumn eventide,
The basket of apples is on my knee, and the dear one at my side;
Happy, smiling girls and boys as thick as they can stow,
Paring and slicing apples, twenty-three years ago.

I live again those golden hours, I see again that happy throng
I listen again to the sound of mirth or the long-forgoten song;
Blushing apples and blushing cheeks, like visions come and go,
And I steal a glance at those bright eyes, twenty-three years ago.

Do you remember, dearest, the words we whispered then?
And does the spell of the golden hours come back in dreams again?
Do you remember those apple peels we o'er our heads did throw,
Anb the letters they made on the sanded floor, twenty-three years ago?

I wonder if the boys and girls keep up those gatherings yet,
Those good old-fashioned apple-bees they surely don't forget;
I wonder, wife, if our bonny boys will ever, ever know
The joys of that rustic apple-bee, twenty-three years ago!

Fallen Leaves.

The wint'ry breeze disrobes the trees
And leaves them sad and cheerless,
Whose open arms dread no alarms,
Like giants bold and fearless.

The withering blast comes rushing past
And grasps the leaves in cold embrace,
Till on the ground their glow is found—
Their beauty perished in its place.

The Summer flew and Autumn too,
Then chilly night and morning
Came down amain, with ice-cold rain,
And smote them without warning.

They trembling pass across the grass,
Or on the path of gravel,
Making a bed soft to the tread,
Where children like to revel.

The rustling noise delights the boys,
Who are in but life's dawning.
While from the trees by slow degrees.
Comes signs of death-like warning.

Like flocks of quail, away they sail,
A whirring, golden column,
Leaving all pale to meet the gale
The maples bare and solemn.

They pile the ground in heaps around;
I hear in walking through them,
A wrestling voice, as if they called
To one who loved and knew them.

—The Hartford Times.

Work.

BY ALICE CARY.

Down and up, and up and down,
Over and over and over;
Turn in the little seed, brown and dry
Turn out the bright red clover,
Work, and the sun your work will share,
And the rain in its time will fall;
For nature, she worketh everywhere,
And the grace of God through all.

With hand on the spade, and hearts in the sky,
Dress the ground and till it;
Turn in the little seed, brown and dry;
Turn out the golden millet.
Work, and your house shall be duly fed;
Work, and rest shall be duly won;
I hold that a man had better be dead
Than alive when his work is done!

Down and up, and up and down,
On the hill-top, low in the valley;
Turn in the little seed, dry and brown,
Turn out the rose and lily.
Work with a plan, or without a plan,
And your ends they shall be shaped true;
Work and learn at first-hand like a man—
The best way to know is to do,

Down and up till life shall close,
Ceasing not your praises,
Turn in the wild, white Winter snows;
Turn out the sweet Spring daisies,
Work, and the sun your work will share,
And the rain in its time will fall;
For nature, she worketh everywhere,
And the grace of God through all.

Song of the Seasons.

Gaunt Winter flinging flakes of snow,
Deep burdening field and wood and hill;
Dim days, dirk nights, slow trailing fogs,
And bleakened air severe and chill,
And swift the seasons circling run—
And still they change till all is done.

Young Spring with promise in her eyes,
And fragrant breath from dewy mouth,
And magic touches from the nooks
Of budding flowers when wind is south.
And swift the seasons circling run—
And so they change till all is done.

Then Summer stands erect and tall,
With early sunrise for the lawn,
Thick foliaged woods and glittering seas,
And loud bird chirpings in the dawn.
And swift the seasons circling run—
And so they change till all is done.

Brown Autumn, quiet with ripe fruits,
And haggards stacked with harvest gold,
And fiery flushes for the leaves,
And silent cloud-skies soft controlled.
And so the seasons circling run—
And still they change till all is done.

Swift speeds our Life from less to more,
The child, the man, the work, the rest,
The sobering mind, the ripening soul,
Till yonder all is bright and blest.
For so the seasons circling run—
And swift they change till all is done.

Yes, yonder—if indeed the orb
Of life revolves round central Light,
For ever true to central force
And steadfast, come the balm or blight.
And so indeed the seasons run—
And last is best when all is done.

1775—1875.

Looking back a hundred years,
And comparing the now and then,
It seems to me that in spite of fears
The country has earnest men,
As willing to draw the sword for right,
As ready to wield the pen.

It seems to me that in faithful hearts
The currents yet ebb and flow,
With a constant motion that still imparts
As steady and clear a glow
Of zeal for freedom's glorious arts,
As a hundred years ago.

It seems to me that in field or forge,
By river and by rill,
In fertile plain and mountain gorge,
In city or hamlet, still
They live as they did in the days of King George,
Of Concord and Bunker Hill.

I do not know that the hands are weak,
Or the brain unused to plan;
That the tongue delays the truth to speak,
Or the foot to march in the van;
But I know full well that we need not seek
In vain for a Minute Man.

There are men to-day that would stand alone
On the bridge Horatius kept;
There are men who would fight at Marathon,
Who would battle with Stark of Bennington,
When flashing from sabre and flint-lock gun
The fires of Freedom leapt.

It is well to look back with pride and boast,
It is better to look ahead;
The past to all is a dream at most.
The future is life instead;
And standing unmoved at your duty's post
Is truthfully praising the dead.

The Absurdity of It.

It is all very well for the poets to tell,
By way of their song adorning,
Of milkmaids who rouse to manipulate cows
At five o'clock in the morning;
And of many young mowers who bundle out-doors—
The charms of their straw-beds scorning—
Before break of day, to make love and hay,
At five o'clock in the morning:—

But, between you and me, it is all untrue—
Believe not a word they utter.
To us milkmaid above is the finger of five
Bring beaux—or even bring butter.
The poor sleepy cows, at best to arouse,
Would do so, perhaps in a morning;
But the sweet country girls, would they show their curls
At five o'clock in the morning?

It may not be wrong for the man in the song—
Or the moon—in a manner to settle,
To kneel in wet grass, and pop; but, alas!
What if he popped on a nettle?
For how could he see, what was under his knee,
If, in spite of my friendly warning,
He went out of bed and his house and his head,
At five o'clock in the morning?

It is all very well for such stories to tell.
But if I were a maid, all-forlorn-ing,
And a lover should drop in the clover, to pop,
At five o'clock in the morning,
If I liked him, you see, I'd say, "Please call at three:"
If not, I'd turn on him with scorning:
"Don't come here, you flat, with conundrums like that,
At five o'clock in the morning!"

FRUITS AND FRUIT TREES—BEST VARIETIES FOR PLANTING.

In our annual advice as to the best varieties of fruit trees to plant for a home orchard, and for profit, we find it necessary to repeat the most important parts of previous articles; in fact, we simply revise our former ones, making such corrections and alterations as the experience of our best orchardists have developed. There may be some good varieties of fruit that we have not included in our list, but certainly we have given none but what are first-rate and well adapted to the peculiar climate of California. We do not give selections from guess work, nor in the interest of any party, but have taken the most careful pains to be as correct and reliable as possible for the general good of our readers.

There is one thing in favor of tree-planters this season—a very important one—and that is the soil is well filled with moisture. This makes it a very favorable season for planting, and one that our farmers should take advantage of. We have never known a more promising opportunity for tree-planting, particularly on upland or dry farms. For a family orchard, more varieties than for a market orchard should be selected. A succession of ripening should be chosen from early to late. A few early varieties are enough, as what are not at once consumed will decay. More trees of late sorts should be chosen, for the keeping qualities of late ripening fruits will extend the time for consumption. The best fruits for canning are neither the very earliest nor the latest varieties; and as putting up fruits hermetically has come to be an important consideration, in addition to drying fruits, more trees of medium ripening kind are required for a complete family orchard than formerly.

For a market orchard but few varieties are profitable to cultivate, and they should be grown with a view of commanding the highest prices; consequently they should be only of the handsomest sorts, and such as will ripen or be ready for market at the season when there is the best demand for them. The locality and effect of climatic conditions must be considered in the matter of selecting fruits for market. For instance, at Marysville and Sacramento the very earliest apples, pears, apricots, peaches, cherries and grapes, will bring the best prices in San Francisco, because in these localities they can produce early fruits several weeks ahead of many other portions of the State. At San Jose, and within the influence of the sea climate, such apples as the Alexander, Maiden's Blush, etc. —Fall apples—are as profitable as any apples that can be grown here. We can get them into market after the run of early apples is over and before the Oregon Winter apples flood the market. Winter apples are also profitable to cultivate in San Jose. But, owing to the nearness to the sea and the cool climate, San Jose is six weeks behind Marysville in ripening early apples. While the early apples that grow at Marysville are very fine, the Fall and Winter fruits grown there are comparatively inferior. At San Jose superior apples can be produced of any variety. Near the bay, currants, gooseberries, strawberries, etc., of superior quality are produced, while in the hotter interior valleys few or none are grown, as they will not do well. So great is the influence of climate on fruits that it is a matter of much importance, and, in connection with the demands and supply of markets, it should be well understood by orchardists.

There are special varieties best suited to dry localities. For instance, where the Rambo and Wine Sap varieties of apples will dry up so as to be worthless, the Skinner's Seedling and Gravenstein will do very well. The Newton Pippin will make a better apple on dry soils than the White Winter Pearmain, but the former falls off badly, while the latter hangs on. The home orchard should be set where it will be handy to the house, and where it will add beauty to the place. When one makes orcharding a specialty for profit other things should conform to that. Where there is not a natural shelter for an orchard one should be provided by planting trees—evergreens are best—on the two sides from whence prevailing winds blow. Acacia, pepper trees, and Monterey cypress are perhaps the best to plant in hedge form for shelter. It will certainly pay to provide some break-wind, and even willows are better than nothing.

Laying off the orchard, set nearly everything at a uniform distance, and not over 16 feet apart where exposed; when well sheltered, not over twenty feet aprrt. The experience of our best orchardists is in favor of closer planting than is advised by Eastern orchardists. To make true lines and set trees in perfect line, is much neater than careless planting. As an aid to this, a long wire with marks made by tying on strings securely at regular distances we have found to be an excellent line for staking off an orchard—a twine will stretch too much. Find a baseline for one side of the orchard, then get a true right angle at one end cornering on the first line. Then, by setting the wire by the stakes of either side and running parallel lines, sticking the stakes at each mark on the wire, the rows will come perfectly in line without any squinting or laborious sighting with the eyes.

Digging holes for the trees is not such a terrible job as some might think. We would make the holes just deep and broad enough to take the roots at their natural depth without cramping. Let the hole be a little the deepest at the edges and highest in the centre, so that the roots will incline a little down as the tree rests upon the bottom of the hole. Be sure that each root is laid in a natural position, and that nothing but clean earth is placed in contact with the roots, as manure or trash of any kind induces a mould or fungus growth that is poisonous to the tree. What we said last year as to the matter of planting trees we repeat: There are a great many hobbies that are passing current as coin in orchard matters that should be exploded, which are yearly repeated by nurserymen and newspapers about digging immense holes and putting trash under trees, etc. Our advice is, don't put any manure or other trash under your trees when you plant them. Put no manure or rubbish into the holes about the roots. Plant the tree at about the same depth as it grew, in clean soil, laying the roots in a natural position pointing a little downward. You may put all the manure on the surface, after the tree is planted, that you please, but remember, never put manure next to the roots nor under the tree in our dry climate. Tread the soil firmly about the tree so that the winds shall not shake it loose in the soil, particularly where the soil is light. Preparing of the soil for an orchard, we believe it best to plow deep, narrow furrows, and cross-plow and harrow, with long teeth, weighted harrows, so as to thoroughly pulverize the soil. At any rate, let the pulverization of the soil be perfect, whether you plow deep or shallow.

As to the after care and treatment, keep the surface of the soil throughout the orchard loose and light, and free from weeds, all through the season, and especially during Spring and Summer. Never sow grain or grass in the orchard, no matter who advises it. If the land is naturally moist, or can be irrigated, vegetables may be planted and kept cultivated between the rows; but on dry soil, let the trees have all the advantage of clean, well-pulverized soil, so that they can resist the drouth of Summer and grow rapidly. An orchard stunted while young can never fully recover. The best preventative against borers is to shade the stem of the trees. This can be best done by winding strips of cloth about the trunk, from the ground up to the limbs. Be sure to cover the base of the tree, as the borers are most likely to attack the tree close to the ground. Another good way is to put two clap-boards on the south and west sides. Set them firmly into the ground; they will shade the trunks for years, and prevent borers as well as keep the bark fresh and healthy. Selecting the trees is a matter of very much importance. Let every tree be of healthy growth and of symmetrical form. Stunted trees, or such as look bad in the nursery, are seldom worth having at any price.

FOR A FAMILY ORCHARD.

Apples—*Early*—Three Red Astrachan; 2 Red June; 2 White Astrachan; 2 Golden Pippin; 3 Skinner's Seedling, or Maidens' Blush; 1 Gravenstein; 1 early Sweet Bow, for baking. The Golden Pippin is a very tart apple, making it desirable for cooking and drying. It does not dry white as some; not so fine for market as for home use. The Gravenstein falls from the tree badly before ripening, but is fine for eating. Skinner's Seedling hangs well to the tree; is an extra eating and cooking apple.

Early Winter Apples—6 Yellow Bellflower; 2 Johnathan. *Late Keeping Apples*—10 Yellow Newton Pippins; 3 White Winter Pearmain; 1 Nickerjack, and 1 late Talman's Sweet. This makes 34 apple trees, all extra good kinds for California. There are other sorts, favorites with some. Of course we advise each person to have a tree of *his* favorite in addition to this list.

The apples that dry white, and are in demand by the Alden factories for dessication, are Skinner's Seedling, Gravenstein, Smith's Cider, Fall Pippin and Yellow Bellflower. For an apple orchard for profit, where winter

apples ripen late, as in Santa Clara county, and keep well, the Newton Pippin is the very best one to plant. Some orchardist say the *only* one from one acre to a hundred acres would be the Newton Pippin.

Pears—*Early and late*, as they come in succession—Two Dearborn Seedlings; 1 Madaline; 2 Buerre Gifford; 5 Bartlett; 1 Sickle; 1 Flemish Beauty; 3 Buerre Hardy; 2 White Doyenner 2 Glout Morceau; 3 Winter Nellis; 2 Easter Buerre. There is no better flavored pear for drying or canning than the Bartlett; but owing to the softness of the core when ripe enough to dry nicely, it will not hold to the fork of a paring machine, and is not so profitable for the drying factory as the Flemish Beauty, which is round, smooth, easily worked on a machine, and is one of the very nicest drying pears. Swan's Orange and Glout Morceau, are also fine drying pears, where machinery is used. The best shipping pears for Eastern markets, are the Winter Nellis and Easter Buerre. At one time the Bartlett and Buerre Hardy were thought the best, but they do not keep well, and arrive there when Eastern pears are plentiful, while the winter varieties get there in a sound condition and at a time when Eastern pears are not brought into competition to lower prices.

Quinces—Two Orange variety. Quinces are excellent baking fruit, and for canning, either alone or with pears.

Plums—One Cherry Plum; 2 Early Golden Drop; 2 Royal Hative; 2 Jefferson; 3 Columbia; 6 Green Gage; 5 Ickworth's Imperatrice; 2 Coe's Late Red. The latter plum will last till Christmas, and is desirable chiefly for its late keeping qualities. Best for canning—Green Gage. Best plums for drying, are Jefferson, Washington, Ickworth's Imperatrice, Columbia, Rein Claud de Bavey, General Hand. Soft, mushy plums are not desirable for drying, but the plum that has a rich flavor, solid pulp and is easily pitted, is a drying plum. The Quackenboss is called the best shipping plum, owing to its beauty and keeping qualities.

Peaches—One Hale's Early; 1 Early York Serrate; 1 Crawford's Early; 3 Grosse Mignonne;—one of the finest peaches in cultivation; valuable for canning; 1 Late Admirable; Crawford's Late; 2 Old Mixon, cling; 2 Lemon, cling.

Nectarine—One Hardwick; 1 New White.

Prunes—Two Grosse Prune de Agen; 3 Petti Prune de Agen; 2 Fellenburg. The Fellenburg, or German Prune is the best drying prune, and is coming into high favor on that account very fast. It pits *naturally*; is high flavored, with firm flesh. The Petti Prune de Agen stands second, but is rich and fine, though small. The Grosse Prune de Agen is best for shipping, owing to its beauty, size and solidity. It adheres to the pit too tenaciously to be a favorite for drying.

Apricots—Two Early Golden; 2 Moorepark. Nice for cooking, canning and drying, as well as for eating.

Cherries—Two each of Governor Wood, Black Eagle, Black Tartarean, Black Arabian, Coe's Transparent, Kentish or Pie, Cleveland Biggareau, Napoleon Biggareau. The Black Tartarean is the most profitable market cherry, owing to the regular and good bearing quality of the trees, and to the solidity and carrying quality of the fruit, which will not discolor when bruised, and is large, handsome and of fine flavor. There is no better canning fruit than the cherry, also good dried.

Mulberries—Black and Downing's everbearing—trees ornamental as well as good for fruit.

Figs—Take a variety. The Black Brunswick, White Smyrna and Brown Turkey are as good as any.

Oranges—Don't fail to plant out several for fruit and ornament. The Navil, St. Michael and Sicily are leading grafted sorts.

Lemon and Citron—One of each sort, at least.

Walnuts — Half-dozen each of English, American Black, and Pecan.

Chestnuts — Half-a-dozen trees, including American, Italian and Spanish.

Almonds—Six Languedoc, 3 King's Paper Shell.

Mespulas—Two trees.

Olive—Two trees.

This selection will make a respectable orchard for any farmer for family use. Persons living in the hot interior valleys should consult orchardists there as to what particular early varieties are most profitable for early market. For a family orchard the varieties we have mentioned are very choice and succeed each other admirably.

Grapes—Two vines each of White Sweetwater, Isabella and Catawba for a trellis, 10 Rose Peru, 10 Flame Tokay, 50 White Muscat of Alexandria, 10 Black Hamburg, 10 Black Malvoise, 10 Black Morocco. The White Muscat of Alexandria is the very best raisin grape. Any family can make their own raisins nicely and send some to market. The best shipping grapes are White Muscat of Alexandria, Flame Tokay and Rose Peru, so far as tried for profit. For canning, high-flavored grapes are best.

Berries—Blackberries—50 Lawton, 50 Kittertinny; 25 Raspberries; 25 Houghton Seedling Gooseberries; 25 Cherry Currants; of Strawberries the Longsworth Prolific and Jocunda prove the best.

Distance of Planting Small Fruits.—For convenience of cultivating and economy of ground we advise setting the berries at one end of the grape patch in rows the same distance apart.

Plant Grapes 8x8 feet; the Blackberries about 8x3 feet; the Gooseberries and Currants 8x3 feet; the Raspberries 8x3 feet; Rhubarb 8x4 feet. The rows can be all 8 feet apart *one way* for convenience in cultivating, which is handier than odd distances.

Plant Strawberries, Asparagus, etc., in beds or in rows two feet apart, as is most convenient.

The Grangers are circulating a petition praying the next Legislature to pass a bill, "fixing the rate of attorneys' and lawyers' fees where no special contract is made."—*Sacramento Bee.*

Not less than $300,000 worth of oysters will be sold from the Shoalwater Bay beds this season, the gathering and moving of them forming one of the chief industries of Washington Territory.

TARLETON ORCHARD CULTIVATOR.

The best implement for working up weeds in an orchard is probably the one invented and used by Mr. G. W. Tarleton in his fine orchard near San Jose. The wood-work consists of three beams placed parallel about 16 to 18 inches apart and strongly connected by braces, and the handles similar to common cultivator handles. To each of these beams is attached, by standards 14 inches long, a double-winged hoe, made of 2^1_2 inch spring steel, with a point similar to a plow-point, the point pitching down a little to hold steadily to the ground when working. The wings are 18 inches long, level on the edge, not flat but slanting downward some 25 degrees, to give the weeds, when cut off, an upward send. The ends of the wings are 21 inches apart, which spread gives about the same angle to each share as a common plowshare has. In front of each hoe is attached to each beam by the common half-circles, a common eight-inch plow wheel, to grade and regulate the depth of each hoe, so the cultivator rests on the three wheels.

Mr. Tarleton grades his to cut two inches deep only. The implement is not calculated to cut over three inches deep, and will not stand deep running, although made of best spring steel to give elasticity and strength to the shares or flanges. We saw this cultivator in use, and it works exactly as desired. Mr. Tarleton does not cultivate his orchard ever more than two to two and one-half inches deep, but cuts every weed out clean. Two horses will run this cultivator with ease in wet soil, and in dry, light soil one horse is enough. After going over the ground with this and cross cultivating, a harrow is used to finish the work. In dry weather and when the soil is not wet by irrigation the weeds are all destroyed by the cultivator, so that the harrowing afterwards is dispensed with.

We have taken some pains to describe this implement, as it has been in use for some years and has been adopted by several of our best orchardists, and is universally pronounced to be the very best thing for the purpose ever gotten up.

We did not enquire the cost, but any one at a distance wanting one can have it made to order by dropping us a line, in the best manner and at the lowest cost.

Farming at the South.—In calling attention to a meeting of farmers at Petersburg on Tuesday of this week, the Richmond *Whig* takes occasion to say: "The cause of agriculture is receiving accessions of energy and ambition every day in Virginia. Some of the best intellects of the State are turning to it with more exclusive devotion now than has ever been the case before. The Granges are great adjuncts to the agencies that are working for its advancement. The mental, as well as physical labor of the farmer is in process of being better systematized. The tillers of the soil are beginning to take the touch of elbow among themselves more than they ever did. They are organizing more closely and conferring more frequently and more freely. These are cheering signs for the old State, and it brightens and heightens the hopes in our hearts to see them." And what the *Whig* says of Old Virginia, may be said of most of the Southern States. It is the "touch of the elbow" that does the business.—*Prairie Farmer.*

Correspondence.

[For the CALIFORNIA AGRICULTURIST.]

A CHRISTMAS STORY, FOUNDED ON TRUTH.

BY NELL VAN.

T WAS CHRISTMAS EVE IN Minnesota. The snow-covered earth reflected the pale moonbeams, while the merry tinkle of passing sleigh-bells fell cheeringly on the ear at intervals.

A group of young people were gathered around the blazing hearthstone in good Aunt Myra's sitting-room, engaged in telling stories. Beside the chimney hung stockings of various sizes; for what is Christmas to the wee ones without "Santa Claus" and stockings for him to fill.

Glance at the group sitting there in the firelight, with their shadows thrown upon the white ceiling: A bright-eyed, fair-haired boy lounged on the rug, with one arm around his favorite—a black-and-tan terrier—and his other resting on the shoulder of black-eyed Georgie, his cousin from California, who had come to pass the winter at Aunt Myra's. She was a tall, rosy-cheeked gypsy, with hair like a raven's wing clustering about a broad, intellectual brow. Her teeth were like pearls, and her full, cherry-like lips were ever ready to kiss or laugh, as the occasion offered. Laura and Fanny came next—the one, a roguish, brown-eyed puss, and the other stately and reserved, her cold grey eyes and queenly brow demanding homage from all by her apparent intellectual superiority. Jenny was there, a little fairy, sitting on a footstool at Aunt Myra's feet with her head in her lap, looking from one to the other and calling for more stories in every lull in the conversation.

It was Georgie's turn, they all said, as Aunt Myra stirred the fire and tossed on another log. "Yes, Georgie's turn," said Will, snapping his thumb and finger in the direction of his cousin; "come now, tell us something stunning about California life." "Oh, yes!" exclaimed the others, in concert.

Glancing from her companions to her aunt she said: "I cannot think of a good story, suitable for the occasion, but I can give you a bit of personal experience that happened to me when I was a child; for now, you know, I'm quite grown up. One begins to feel old at sixteen, and it was ten years ago to-morrow that we were all so happy."

"We are all ready, my darling," said Aunt Myra. "It seems but yesterday when you were here, a babe four months old, when your dear papa was carried out from our sight and laid in the churchyard that sad, sad Christmas day. Sixteen years, you say, since then! Ah me, how time flies! but you are here again, the living likeness of that most precious one. Yes, tell us something of your California life—'a true story,' as the children say. I, too, like them best."

"Well, then, imagine me a little frolicsome child of six, who was spending the Summer in Aunt Eleanor's quiet home. Her neat, white cottage was shaded with jessamine and honeysuckle, and shrubbery filled the door-yard, among which we children rambled to our hearts' content. There was a birthday party for me, I remember, and little boys and girls were there all decked out in gay sashes and neckties, while gayest among them all was Aunt Eleanor herself, who started plays for us and played the piano while we danced. Well, the next day found me a little fretful and uneasy. It was the reaction after such intense excitement. My aunt tried various ways of amusing me, but nothing would do but I must go somewhere. My playmates were all in school, so Auntie chanced to think of an unpaid bill which she asked if I would like to go and settle for her. Delighted with the idea of paying out money, I started up and expressed my willingness to go at once. Taking from her pocket a twenty-dollar gold-piece, she folded it in the cabinet-maker's bill, and placing it in my hand said, "Now, Georgie, hold it fast and do not lose it." Of course I promised faithfully, and with my light sun-hat on my arm, I started out at full speed. Now in California we have long seasons without rain, when the earth is dry and parched, and the roads cut up, leaving dust often several inches in depth.

"The village where my aunt lived was one of considerable size and in a manufacturing district, so the roads all about were much traveled, and consequently quite dusty. I scampered along, singing as I went, till arriving within sight of the shop where I was to go, I missed the gold-piece from my hand. The bill lay folded in my fist but no money was there. Back I went over the same path, slowly returning to my aunt with the mournful news that I had lost the money.

"'Lost the money, Georgie!' It cannot be. Let's go together and look for it.' She slipped on her hat and slowly and carefully we passed over the same ground, going and coming, till near nightfall, but not a trace could be seen of the coin. The neighbors became interested in the search, and with sticks to rake among the dust they came to our assistance without avail. Days passed on and cousin Tom, then a lad of ten years, insisted that some one must have picked it up while I had gone to tell the news; so whenever Aunt urged him to search more, he would say he was sure there was no use, for it could not have lain there all this time without being picked up. Do you believe in fortune-tellers, Aunt Myra? Well, about this time an old, wandering gypsy passed through the village, stopping at every house and telling fortunes in a tea-cup. Of course she tasted the hospitality of the house before she came to the tea-grounds, and most marvelous tales she related to eager listeners regarding their future. She came to Aunt and insisted that there was something in the future preparing for her—some sorrow in the past that she could explain to her. I came in to see who the old body might be, and with eyes distended she pointed her long, bony finger at me and asked where that child came from. "None of yours, sure," she added, looking suspiciously at Aunt as if I had been stolen away from somebody. I was frightened and hid my face away, but the sepulchral tones of her voice sounded in my ears for days after. It was lunch-time, I remember, for we dined in the cool of the day, and Aunt had a cup of tea set for the stranger and offered her some luncheon. After she had finished she pushed back her chair, and with the tea-cup in her hand drained off the moisture, and told Aunt then and there, she saw trouble about money.

"'Here's a man—a laboring man in shirt-sleeves and with a plaid patch in the back of his waistcoat—who picks up a piece of money—your money, ma'am. He says, as he ships it in his palm with the other hand, "That'll just pay my taxes and give me my little home free. How glad Mary'll be to know the heavens have rained down money to help us!" Have you lost any money, ma'am?' enquired she, turning full upon my aunt. Yes, there had been money lost, but who the man could be that picked it up no one could conjecture, as no person answering to the description had been seen in the neighborhood. The fortune-teller passed on and left us as much in a quandary as before, no one placing much reliance on her word.

"Shortly after this I returned to my city home, and nothing was said to Mamma about the lost money, because I hated to think of it and good Aunt Eleanor did not want to worry her with anything that could not be helped. At Christmas time, six months after, we all went over, by urgent invitation, to spend a week at Dessamine Cottage, as I love to call Aunt Eleanor's home. The early rains had settled the dusty roads and brought forth the fresh young grass. The woods through which we passed in the old fashioned stage coach were fragrant with all sorts of delightful herbs and evergreens, among which the redwood, towering to the skies, sent forth its share of its peculiar perfume. Arriving there we found my aunt and cousins all expectation, and the rooms were beautifully decorated with wreaths of evergreens, and the word, 'Welcome!' was hung opposite the door in the best parlor, where was also a fine mistletoe, under which, if a boy caught a little mate, you know a kiss is the legal penalty. Blundering in, lost in admiration, Cousin Tom led me directly under the mistletoe and kissed me saying, 'There, Georgie, I caught you first.' Nothing went amiss with me that day, though upon ordinary occasions a boy would have to smart for his audacity if he dared steal a kiss even at that tender age.

"Christmas day dawned bright and clear, and we children were up before dawn and down to our stockings. Oh, what merry times we had looking at the pretty things Santa Claus had left so prettily. After Auntie came down we were taken into the parlor, and there, in the centre of the room stood the loveliest Christmas-tree I ever saw or shall expect to see again. It was all decked with strings of pop-corn, with fancy horns of plenty filled with candy, and every conceivable toy and gift suspended from or resting on the branches. Tiny flags were mixed in and gilded balls. O, you never dreamed of a prettier sight. Our gifts were all labeled, so that it was an easy task to distribute them, and Tom in a brand new suit, with cap to match, looked most wonderful to my young eyes. Soon after breakfast, when the sun shone out warm, a walk was proposed by Master Tom, who offered to take good care of Freddy, who was just able to walk nicely. Mamma and Aunt Eleanor willingly assented, and dressed out in our very best we stepped off quite gaily. I should never forget that walk as long as I live; for what do you think? when we were walking over the same piece of road where I had passed when I lost the gold-piece there was a deal of mud, so Tom, like a careful boy, lifted Freddy over it, and glancing down, in a wheel-track he espied something shining which he picked up, and there it was—the lost twenty-dollar piece! Six months it had lain concealed beneath the dust, to be a surprise to us on Christmas day! Hastening home we held out our treasure and carry us, we related the circumstance to the astonished group. Mamma had never heard of the losing of the money, and was the more amazed to think of its being lost and found without her knowledge.

"How we danced and sung and made merry because the lost was found; and what had hung like a cloud over my childhood's vision of dear Dessamine Cottage was now removed, and Aunt Eleanor's double eagle no care had to her. What did she do with it? Why, she had it changed into two ten-dollar gold-pieces and gave one to Mamma for bringing me over to be the means of finding the lost treasure.

"My story is done; for our Christmas day will soon be here, and if it be as happy as the one we spent that year, some of you may make a yarn to amuse another group some future Christmas eve."

A FASHIONABLE RECIPE.—Take a young lady, turn her once in a breadth of satin, twice in a gauze scarf and three times in a puff of tulle; add twenty yards of flowery garlands wherewith to season the whole. The dish is then trussed up, but has not yet sufficient dressing. Something heavy, in the shape of a train is needed. It may be made of matelasse with raised flowers, or of brocade. Skewer it on well behind, and garnish with ganze butterflies, lace birds or gilt beetles. Keep very warm at the base and very cool at the top. Remove the dressing as much as possible from the upper part and pile it on below. Season with diamonds and serve up warm.

FROM SAN BENITO COUNTY.

Peach Tree, San Benito Co., November, 1875.

Dear Agriculturist: Noticing your varied correspondence, I thought a letter from this out of the way place might not be amiss.

This is most exclusively a stock country; being so far from market that grain, etc., could not be transported for what it would bring in the market of the world, even if raised.

Cattle, hogs, dairy products and poultry form the staples here. Barley is 3½ cents a pound; wheat is hard to get at any price; hay is evidently plenty, notwithstanding the dry season.

Hogs are made quite a speciality of. We have talked with several men who have had experience, and they all consider the berkshires the most paying hogs; because they are so much more hardy than the Essex, and the meat commands a higher price when cured.

Such a thing as an orchard is almost unknown up this far in the mountains. There is but one in Peach Tree, and that is a small one.

About twenty-five miles toward Hollister, here in a steep-sided canon, near San Benito, is a grist mill, belonging to Gough & Wagner. It is doing a good business in grinding feed and flour; the latter, good in quality, as we can testify from experience. Mr. Gough has a cosy little place, about a quarter of a mile above his mill, where he raises all kinds of vegetables, and has a small orchard, which will soon be in bearing; also, about four acres of alfalfa, which corroborates all that has been said in praise of it. He has cut, we understand, twenty-five tons of hay, and pastured twenty-five head of cattle on it since July, and still it presents an appearance of good feed. Altogether, Mr. Gough's place seems like an oasis in the desert.

About twelve miles north of here is the Bitter Water valley, and the water is characteristic of the name, for it is as bitter as modified gall, owing to the presence of peculiar salts, which render it purgative in character. A gentleman here, showed me a piece of rock composed of shells and sandstone. This formation is very plenty here, forming quite a feature in the geology of the country. He found several pieces of fossil bones, which he sent to the State Normal School; but has not learned as yet to what ancient monster they might have belonged.

Society here is rather mixed.

"Men of every nation;
Birds of every feather,
On a common level,"

associate and fraternise much more freely than one would suppose possible, from the diversity of tongues spoken.

It seems to be no disgrace to get drunk, especially among the Spaniards and Mexicans. The state of the Temperance question is well illustrated by the following anecdote. An old Mexican lady was describing a fandango, and in particular the supper, said she: "have cake, have pie, have chicken, and (with special accent) have *plainty whisky*." F. G.

Letter from Lompoc Temperance Colony.

Editor Agriculturist and Live Stock Journal: I have had several proofs that the Agriculturist is a good paper to carry around news.

Since my last letter from this place, inquiries come from all round the country, asking further information. A gentleman who takes a prominent part in advancing all good causes here, gives me this extract from a letter recently received from Silver City, Idaho.

"Seeing an account of the Lompoc Temperance Colony in that excellent paper the Agriculturist, I take the liberty of asking you a little more about it," etc. The writer never dreamt of seeing his own words repeated in your columns, no doubt. But I feel that you and your subscribers are entitled to the encouragement they incidentally contain.

I have only time to add that our land is selling off so rapidly and the valley filling up so fast, that another Temperance Colony is projected from a neighboring ranch or two. If the plan succeeds, it will help us much. We shall soon know, and your advertising columns no doubt will give full information to the many families that it will accommodate and prove attactive to. I like this colonizing on the temperance plan. It has so far successfully kept out the sale of whisky in our valley. People see we *mean* it, and value the exemption from the curse and expense of tippling and intemperance.

We have had a fine rain for a starter. Weather just lovely; health excellent; everybody preparing to put in large crops of potatoes, beans, corn, pumpkins, beets, barley, wheat, etc., as possible, and some orchards and alfalfa. All feel sanguine.

Yours truly,

J. P. Ross.

Deep Plowing.

The question of *deep* and *shallow* plowing is one, which though often discussed, seems to be an unsettled one in the minds of a large number of farmers.

Perhaps a farmer of twenty years experience in England and California may be permitted to express an opinion on this question based on careful and repeated experiments.

I am persuaded that the first principle in agriculture is deep plowing, but circumstances must determine *when* to plow deep.

The philosophy of deep plowing may be briefly stated thus: It furnishes a large amount of porous soil, whose absorbent qualities capacitate it for drawing moisture from below and drawing in the plentiful showers from above.

Where deep plowing and thorough cultivation go together, the finely commixed condition of the soil, makes it more receptive of the influences of *sun, air* and moisture, and more retentive of each—as well as becoming a mass of the most assimilable food for plants.

The mineral elements of the soil being found largely in the subsoil, cannot be brought into acquisition but by *deep plowing*, which disintegrating that hard mass, and freeing its elements, presents them for oxygenation, and by the free circulation of air, decomposes, pulverises and makes assimilable.

As the wheat crop depends largely on the mineral constituents of the soil, other circumstances being favorable, deep plowing is essential to the supply of its necessary food. The wheat plant is provided with a *long tap root*, which on deeply plowed land often reaches to the depth of twelve inches or more.

Barley sends out its roots more latterally and will thrive better with shallow plowing, than wheat or oats.

It does better after root crops and on light or shallow soils, maturing earlier, and is more remunerative in a dry season than wheat or oats.

The conditions of success in deep plowing, are earliness, and thoroughness of after cultivation.

In California if done as late as January, it had better not be done at all as a rule, as there is no time to weather the furrows, or break it up into a fine assimilable shape.

In this condition it is neither *absorbative* nor *retentive* of moisture; and wheat may as well be sown among stones.

Much of the prejudice against deep plowing in California arises from the difficulty of securing such a *mechanical* condition of the soil—such a fine tilth as promotes such compactness as the wheat plant demands.

To ensure success, the land should not be plowed during heavy rains nor too early after them, but if the condition of the soil warrants it, as early in November as possible.

If practicable, sowing should not take place before not much after the first week in February. A cultivator should then be used as well as a harrow, and if the weather will admit, the last operation before seeding should be followed with a good roller, the seed-drill following after, and finishing off with the harrow.

Such cultivation, other things being equal, will insure a good crop.

As supplementary to the above, when the crop is about four inches high and the surface dry enough, roll down with a heavy roller, which accomplishes the thing—consolidating the soil, assisting the plant to start out, and producing an even surface for the reaper at harvest-time.

Our old correspondent, J. B. Rumford, formerly of Plano, Tulare county, has moved to Kern Island, and reports to us that he has found an excellent locality for all kinds of vegetation. He says that land seeded to alfalfa will yield immensely, and will pay 18 per cent. or $100 per acre, annually above expenses. Corn and vegetables grow without irrigation. And there is no more sickness from ague than along the Sacramento or San Joaquin rivers. We expect a long letter from Mr. Rumford soon.

FLECKS OR SOUDS IN BUTTER.—A QUERY.

Ed. Agriculturist and Live Stock Journal:—Can you, or any of your dairyman readers, inform me what the *souds* in butter are? I have come to the conclusion that they are nothing but cream, while a great many think that they are sour milk. However, I would like your ideas on the subject.

Enquirer.

We have often noticed these "sends," as our correspondent calls them, in butter, and in our experience in dairying have noticed that sometimes they have been composed of particles of cream—tough cream that had been exposed too long and had become flecked with a sort of mould which caused the particles to adhere, and prevented the globules from separating and coming together as butter as soon as the good cream, free from such tough mould. We have also known mould to form a sort of membraneous substance, like tough skin, on or under cream that has stood too long or been exposed in a tainted atmosphere. These, like pieces of thin cuticle, would remain in the butter. The remedy is to have a clean dairy-room, thoroughly scald the pans, etc., and not allow the cream to stand too long before or after skimming. We give this as simply our own observation, and ask our dairy subscribers to send in their ideas on this subject, that we may compare notes and arrive at the true solution.

To know how to keep a tidy house and well aired apartments, to know how to select the best kinds of food, to know how to prepare them in the best manner—these are first things, and every daughter should learn them before marriage.

Stock Breeders.

International Exhibition of Live-Stock at Philadelphia, 1876.

FIRST.—The Live-Stock display at the International Exhibition will be held within the months of September and October, 1876; the periods devoted to each class and family being fifteen days, and the division as follows: Horses, mules and asses, from September 1st to 15th. Horned cattle (varieties), from September 20th to October 5th. Sheep, swine, goats and dogs, from October 10th to 25th. Poultry will be exhibited from October 28th to November 10th. 2. Animals to be elgible for admission to the International Exhibition must be, with the exception of trotting stock, walking horses, matched teams, fat and draught cattle, of such pedigree that the exhibitor can furnish satisfactory evidence to the Chief of Bureau, that:—As applied to thorough-bred horses, as far back as the fifth generation of ancestors on both sides, they are of pure blood, and of the same identical breed. As to short-horned cattle, they are registered in either Allen's, Alexander's, or the English Herd books. As to Holsteins, Herefords, Ayrshires, Devons' Guernseys, Britainys, Kerrys, and other pure breeds, they are either imported or descended from imported animals on both sides. As to Jerseys, that they are entered in the Herd Register of the American Jersey Cattle Club, or in that of the Royal Agricultural Society of Jersey. As to sheep and swine, they are imported or descended from imported animals, and, that the home-bred shall be of pure blood as far back as the fifth generation. 3. The term breed, as used, is intended to comprehend all family divisions, where the distinction in form and character dates back through years of separtion; for instance, it is held that the progeny of a pure-blood Jersey and a pure blood Guernsey is not a thoroughbred, but a cross-bred animal, and as such, is necessarily excluded. 4. In awarding prizes to animals of pure blood, the Judges will take into consideration chiefly the relative merits as to the power of transmission of their valuable qualities; a cardinal object of the exhibition being to promote improvement in breeding stock. 5. In case of doubt relative to the age of an animal, satisfactory proof must be furnished, or the animal will be subject to examination by a veterinary surgeon; and should the state of dentition indicate that the age has not been correctly stated, the person so entering as an exhibitor will be prohibited from exhibiting in any class. 6. The forms of classification for awards, as given under each head, are intended (excepting in the case of trotting stock, walking horses, matched teams, fat and draught cattle) to apply to any of the animals of pure breed that are entered for competition. 7. The Exhibition being open to the world, it is of the first importance that the best of their kind only be brought forward, as the character of the stock will be judged by the average of those exhibited. 8. Exhibitors will be expected to furnish their own attendants, on whom all the responsibility of the care of feeding, watering and cleaning the animals, and also of cleaning stalls, will rest. 9. Forage and grain will be furnished at cost prices, at depots conveniently located within the grounds. Water can be had at all hours, ample facilities being provided for its conveyance and distribution throughout the stock-yards. 10. Exhibitors must supply all harness, saddlery, vehicles and other appointments, and all such must be kept in their own places. 11. The Commission will erect ample accommodation for the exhibition and protection of live-stock, yet contributors who may desire to make special arrangements for the display of their stock, will be afforded facilities at their own cost. Fractious animals, whether Stallions, mares with foals, or bulls, will be provided with stalls of desirable character. 12. All stalls will be regularly and distinctly numbered; corresponding numbers on labels of uniform character will be given to each exhibitor, and no animal will be allowed to pass from its stall without its proper number attached. 13. Numbers *alone* will distinguish stock in the show-yards, preceding the awards of prizes. 14. The Judges of live-stock will make examination of all animals on opening day of each serial show, and will for that day have exclusive entrance to the show-yard. 15. No premium will be awarded an inferior animal, though there be no competition. 16. All animals will be under the supervision of a veterinary surgeon, who will examine them before admission, to guard against infection, and who will also make a daily inspection and report. In case of sickness the animal will be removed to a suitable enclosure especially prepared for its comfort and medical treatment. 17. When animals are taken sick, the exhibitors may either direct the treatment themselves, or allow the veterinary surgeon appointed by the Commission to treat the case. In this latter event the exhibitor will be charged for all the expenses incurred. All possible care will be taken of animals exhibited, but the Commission cannot be held responsible for any injury or accident. 18. A ring will be provided for the display of and exercise of horses and cattle. 19. On the last day of each serial show a public auction may be held of such animals as the exhibitor may desire to sell. Animals may be sold at private sale any time during their exhibition. During the period of a serial show no animal, even in the event of being sold, will be allowed to be definitely removed. 20. An official catalogue of the animals exhibited will be published. 21. Exhibitors of thorough-bred animals must, at the time of making their entries, file with the Chief of the Bureau a statement as to their pedigree, affirmed or sworn to before an officer authorized to take affidavits, and the papers so filed shall be furnished to the Jury of Experts. 22. The ages of live-stock must be calculated up to the opening day of the exhibition of the class to which they belong. 23. Sheep breeders desiring to exhibit wool, the produce of the flocks, will display not less than five fleeces. 24. All animals must be entered according to the prescribed rules as given in forms of entry, which forms will be furnished on application to the Chief of the Bureau of Agriculture.

BREEDING HORSES.—Mares entered as breeding animals must have had foals within one year of the show, or if in the foal, certificate must be furnished to that effect. All foals exhibited must be the offspring of the mare with which they are at foot. Awards will be made to respective breeds for:—Pure bred turf stallion, six years and over. Pure bred turf stallion, four years and under six years. Pure bred turf stallion, over two years and under four years. Pure bred turf mares, six years and over. Pure bred mares over two years and under six years. Awards will be made for:—Trotting stallions, six years and over. Trotting stallions, over four years and under six. Trotting stallions, over two years and under four. Pure bred draught stallion, six years and over. Pure bred draught stallion, over four years and under six years. Pure bred draught stallion, over two years and under four years. Pure bred draught mares, six years and over. Pure bred draught mares over two and under six years. Trotting brood mares, six years and over. Trotting fillies, over four years and under six. Trotting fillies, over two years and under four.

RUNNING AND TROTTING HORSES.—Shall be judged according to their record up to August 15th, 1876, due regard being had to present condition. Awards will be made for:—Running horses having made fastest record. Trotting stallions having trotted a mile within two-thirty. Mares and geldings having trotted a mile within two-twenty-five.

WALKING HORSES.—Fast walking horses, whether bred for agricultural purposes or the saddle, will compete in the ring for awards.

MATCHED TEAMS.—Awards will be made for:—Matched teams having trotted a mile in two-thirty-five. Matched Stallions for heavy draught, over sixteen hands high, and over fifteen hundred pounds weight each. Matched geldings for heavy draught, over sixteen hands high, and over fifteen hundred pounds weight each. Matched mares for heavy draught over fifteen hands high, and over fourteen hundred pounds weight each. Matched mules for heavy draught, fifteen and a half hands high, and over thirteen hundred pounds weight each.

BREEDING ASSES.—Awards will be made to respective breeds of pure bred jacks over six years; pure bred jacks over three years and under six; pure bred she-asses over six years; pure bred she-asses over three years and under six.

NEAT CATTLE.—No cow will be eligible for entry, unless accompanied with a certificate that, within fifteen months preceding the show, she had a living calf, if born dead, was born at its proper time. No heifer entered as in calf will be eligible for a prize, unless accompanied with a certificate that she has been bulled before the first of April, or presents unmistakable proof of the fact to the judges. No bull above one year old can be entered unless he have a ring in nose, and the attendant be provided with a leading stick, which must be used whenever the animal is taken out of the stall. Awards will be made for the best herd of each respective breed, consisting as follows: One bull, four cows, none under fifteen months; neat cattle, of each respective breed, will compete individually for awards. Bulls 3 years and over; bulls over 2 years and under 3 years; bulls over 1 year and under 2 years; cows 4 years and over; cows over 3 years and under 4 years; cows or heifers in calf, over 2 years and under 3 years; yearling heifers. A sweepstake award will be made for the best bull of any breed; a sweepstake award will be made for the best cow of any breed.

FAT AND DRAUGHT CATTLE.—Animals entered as fat and draught cattle need not be of pure blood, but will compete on individual merits. Fat cattle must be weighed, and in general those will be judged best which have the greatest weight with the least surface and offal. Awards will be made for:—Best fatted steer of any age or breed; most powerful yoke of oxen; most rapidly walking yoke of oxen; most thoroughly trained yoke of oxen; most thoroughly trained team of three or more yokes of oxen.

BREEDING SHEEP.—All sheep offered for exhibition must be accompanied with certificate to the effect that they have been shorn since the 1st of April, and the date given. If not fairly shorn, or if clipped so as to conceal defects, or with a view to improve the form or appearance, they will be excluded from competition. Awards will be made to respective breeds for the best pen of five animals of same flock and including one ram, the ewes all having had living lambs the past spring. Awards will be made to respective breeds for rams 2 years and over; shearing rams. A sweepstake award will be made for the best ram, respectfully of long, middle, and fine-wooled breeds. Awards will be made to respective breeds for ewes in pens of three, all having had living lambs; shearing in pens of three. A sweepstake award will be made for the best pen of three breeding ewes, respec-

tively of long, middle, and fine-wooled breeds.

Fat Sheep.—Fat sheep entered for competition must be weighed, and in general those will be judged best which have the greatest weight, with the least surface and offal. Awards will be made for pen of three best fatted sheep of any breed.

Breeding Swine.—Every competing sow above one year old must have a litter, or be in pigs, and the owner must bring proof of these facts, if required. If a litter of pigs be sent with a sow, the young pigs must be sucklings, the offspring of the sow, and must not exceed the age of three months. Awards will be made to respective breeds for the best pen of one boar and two breeding sows; for pen of sow and litter. Awards will be made to respective breeds for boars 2 years old and over; boars 1 year old and under 2 years; boars between 9 months and 1 year; breeding sows 2 years old and over; breeding sows 1 year old and under 2 years; den of three sow pigs between nine months and one year. A sweepstake award will be made for the best boar of any breed. A sweepstake award will be made for the best sow of any breed.

Fat Swine.—Fat swine entered for competition must be weighed, and in general those will be judged best which have the greatest weight, with the least surface and offal. First, second and third prizes will be awarded for pair of best fatted hogs of each breed; pair of best fatted hogs of any breed.

Dogs.—Awards will be made to respective breeds for dogs of two years and over; dogs of one year and under two; pups. A sweepstake award will be awarded for the best dog of any breed displayed by a foreign exhibitor. A sweepstake award will be awarded for the best home-bred dog of any breed. Awards will be made to respective breeds for bitches of two years and over; bitches of one year and under two; bitch pups. A sweepstake award will be awarded for the best bitch of any breed displayed by a foreign exhibitor. A sweepstake award will be awarded for the best home-bred bitch of any breed.

Poultry.—Poultry can only be exhibited in coops made after specifications furnished by the Bureau of Agriculture. Awards will be made to respective breeds for pairs of one year and over, of chickens, turkeys, geese, swans, pigeons, guineas and ornamental birds For pairs under one year.

Fish.—Living fishes will be displayed in both fresh and salt water aquaria. Awards will be made for largest display of fish of each species. Largest display of fish of all species.

A. T. Goshorn,
Director General.
Burnet Landreth,
Chief of Bureau of Agriculture.
Philadelphia, Nov. 10, 1875.

Camels.—Denison *News*, October 29: Our old Arizona friend, Bethel Coopwood, now residing at Austin, Texas, has made a business of raising camels in Texas for over ten years, and it has proved quite lucrative. When he travels over the State, which is quite frequently, he moves in a style becoming an oriental prince, with a train of camels, himself mounted on the most venerable specimen of his collection. A few days ago, as we see by the papers, he sold five out of his herd for $1,650—two year-olds at $250; three year-olds at $350 and five year-olds at $450. All these camels were foaled within twenty miles of Austin. The five year-old is the largest camel ever seen in America. Mr. Coopwood can supply all the circuses in America. We understand he proposes to rear ostriches and elephants, and is making preparations to receive Shetland ponies at his ranch.

Shipment of Short-Horns for San Francisco.—Says the North British Agriculturist: On October 20th there were shipped from Liverpool, by the steamship Erin, a number of highly-bred short-horns by Mr. R. B. Ashburner, their destination being San Francisco, where he has been resident for some years. Mr. Ashburner purchased at the recent sale of his brother, Mr. W. Ashburner, at Conishead Priory, and from the herds of his younger brother, Mr. George Ashburner, Low Hall, and Mr. Brogden, M. P., four bulls and seven females—which he accompained on the voyage. The animals are mostly of Bates' blood.

The Dairy.

Commencement and Progress of Associated Dairy Farming.

While this system of individual dairying was at its height there was, by chance, a convenient arrangement invented in Oneida county which in due time revolutionized the system of cheese manufacture, and has given the history of agriculture that method which is known as "the American system of associated dairying." As in the case of many an important innovation upon established customs, the inventor builded more wisely than he knew. Jesse Williams owned, in 1851, a private establishment for cheese-making near Rome, in Oneida county, New York. He had achieved a reputation as a manufacturer of the best quality of cheese. To him, as to many others, this reputation was a direct money value upon the market. He could make a contract for a better price than others, and the demand for his cheese was greater than the supply. In the Spring of 1851 one of Jesse Williams's sons was married and went to live upon a dairy farm near his father's. The cheese from this farm Mr. Williams contracted at the same price as his own, but there was a necessity that it should be of the same quality. This was the quandary—how can the cheese be alike when the father is a skilled manufacturer and the son is not? This was the question which Mr. Williams had to answer. It first occurred to him that he could go each day to his son's dairy-house and try to impart to his son his own skill in manipulation. But this involved a great deal of trouble; and Mr. Williams second thought was the principle of associated dairying which will make his name endure. It was a happy thought—happy in its exceeding simplicity and in its fitness for universal application, as events have proved. Mr. Williams could not go to the milk—the milk must be brought to him. The success which he attained in his venture was the keynote of the success which has been gained by the wide application of his method. Skill cannot act in many places at the same time, but skill is powerful over masses of material; one large establishment occasions less labor and expense than a dozen small ones, each doing one-twelfth of its work; all supplies are cheaper at wholesale. These are some of the advantages that have led to the wide adoption of the American factory system. They were not perceived at once. For three years Mr. Williams and those who brought milk to him profited by them. During the next five years only three or four establishments were erected each year. Since that time the growth has been rapid. In the year 1866 there were more than 1,000 factories in operation in New York State. The appreciation of the advantages of the factory system gave, at length, a marvelous impulse to the industry. Cheese-making, which was once monopolized by the rich counties of Central New York, is now a flourishing specialty in half-a-dozen regions of the State. It has pushed westward, shaping the productive ability of the Western Reserve, finding favoring conditions for growth in Illinois, Wisconsin, Michigan and Iowa, and gathering groups of dairies in almost every other Western State. It is just now spreading anew in Pennsylvania. To the eastward, Massachusetts and Vermont have given it heartiest welcome, and Maine, youngest of the dairy regions, promises to exert an influence upon the supply.

When the abolition of the reciprocity with Canada threw the Canadians upon their own resources, the development there was sudden and extended. In 1873 Canada manufactured 20,000,000 pounds of cheese by the American method, and is now our strongest rival in the English markets. The American factory system has gained an enduring foothold in England, where an American, Mr. Schermerhorn, of Oneida county, was employed by English dairymen to instruct them in its practice. It has been introduced upon the continent of Europe, and the latest tidings of its progress is that Russia has sent emissaries to borrow from England the associated idea which we implanted. The simple contrivance of the Oneida county farmer of 1851 has reproduced itself in at least five thousand establishments, calling to its uses an aggregate capital of at least twenty-five millions of dollars for working facilities alone, and placing each year upon the markets of the world a manufactured product worth one hundred and fifty millions of dollars. And the system is not yet twenty-five years old.—*Harper's Magazine for Nov.*

Poultry Yard.

Watering Poultry.

It is the belief of the writer that many of the diseases incident to poultry are due to neglect in providing them with pure water. Particularly do I believe such to be the case in the majority of instances where chicken cholera prevails. The omission to furnish fowls with suitable drinking water is one of the worst features of cruelty to animals. It is a neglect that is decidedly adverse to success, and hence tends to diminish individual fancy for fowls and works detriment to poultry interests. Those whom we occasionally hear say that "there is no profit in poultry" are not qualified to have the management of the same, and in their attentions may be classed with those thriftless and neglected parties who keep fowls that get drink when it rains.—*Fancier's Journal.*

Buckwheat for Poultry.—Buckwheat is one of the most staple articles of poultry food. It is very fattening, an excellent egg-producer and very much relished by the poultry. It is not, perhaps, used as extensively here as in Europe. In England, France, and especially in Germany, it forms not only an important part of poultry food, but is much used for various culinary purposes. The great advantage which it has over other cereals is, that it thrives luxuriantly even on the poorest land. Those who have not tested its value as poultry food we advise to give it a trial.

We must not, says the *Western Rural*, attach too great importance to non-essential and comparatively valueless peculiarities of poultry. Flesh of good quality, eggs of good size and plentiful in number, early maturity, good size, hardiness, good disposition—these are more important than the color of the feathers or legs, the size or shape of the comb or tail or the number of toes.

A breeder of poultry writes: "Every spring I procure a quantity of cedar boughs and scatter them plentifully in and around the hen-house. This is all that is necessary, as the odor of the cedar keeps away lice. This remedy is cheap, simple and effective, and is well worth trying by all who have hens to care for."

Hens' eggs hatch in from 19 to 21 days; turkeys' in from 26 to 29 days; ducks' in 28 days; Guinea fowls' in from 25 to 27 days; pea fowls' in from 28 to 30 days; geese' in from 30 to 32 days. Fresh eggs will hatch one or two days sooner than those two or three weeks old.

Hygienic.

Croup and How to Treat it.

BY "JEWELL."

Of all ailments children are liable to, perhaps none is more sudden, and requires more prompt attention on the part of parents and attendants, than croup. Certainly nothing sends such a thrill of terror to a mother's heart as that harsh, grating cough, like the barking of a dog, in the stillness of the night, especially if that mother has seen one of her beloved little ones lying cold and still, suffocated by her not knowing *how to do* in time, I find *we mothers must know* how to apply simple remedies in our families, or bear the consequences. Doctors are not always near by to be called in every time our little ones need care; and even if they were, it is an expensive luxury, to pay for putting the responsibility on someone else that rightfully belongs to us.

Croup is inflammation of the trachea, and in some cases the inflammation is so concentrated that the mucous or phlegm forms into a false membrane which is very tough, causing first a rattling sound, and producing strangulation if not relieved immediately. In the ordinary form of croup the cough is dry and hard, and is easily remedied by anything that will bring the inflammation to the surface. Put on an extra flannel shirt or waist over the nightgown and have a big flannel to wrap the throat in; then saturate a smaller piece of flannel in kerosene and lay over the throat and chest, wrap well outside with the large flannel, and in very many cases the child will sleep well the rest of the night. Follow this up for several nights—if the skin is much inflamed leave the kerosene off—and you will have no trouble with the croup. Always see that the *feet are warm* and try and not awaken the child, as it is always better for it to *rest and keep quiet* when there is any ailment of the respiratory organs—remember this. Some persons of delicate skins cannot bear kerosene. Goose-grease or sweet-oil, with red peper sprinkled over, is very good, or hot water with plenty of flannel to cover, is also good; also cold salt water. If the case is very severe, a hot bath, as warm as the child can bear it, is needed. Take the wash-boiler, and if the child is not too large or the boiler too full of water, it makes the best kind of bath-tub (off the stove, of course) immersing the child entirely, except the head; have more warm water to fill up with, and keep the child in till the skin is red or the patient weary and sleepy. Lay a folded sheet inside of a warm blanket and wrap the child in th s as it is lifted from its bath. In a few minutes commence wiping the body and limbs with a soft towel, exposing the skin to the air as little as necessary, and replace its night-clothes quickly. Then a thorough, warm wrapping after the nightclothes are on is necessary to produce sweating. Apply cold salt cloths to the throat and chest as frequently as may seem necessary. In all cases the mother must use her *head* more than her *heart*, remembering that she has the power to ease the little one equal to the most skilled doctor, provided she be thorough. In some cases a gentle emetic, as Hive Syrup, is given, to throw up any phlegm and produce perspiration, but it is not usually necessary. The following day let the child be better wrapped than usual and have the diet simple and see that the bowels are free. Use an injection of tepid water if they do not move without.

This treatment is better than any medicine, and no child need die with the croup if taken in time and properly treated.

MAKE THEM COMFORTABLE.—"Mary, why do you continue to put up your shoulder in that awkward manner?" said Mrs. Lane sharply to her little girl. "I have reminded you of it half-a-dozen times at least this very day, and still you pay no attention to it. Now remember, if you have to be spoken to again about it this afternoon, I shall keep you at home from Aunt Lucy's to-morrow."

The child's face flushed, and as she looked down, her eyes half filled with tears. She seemed timid and anxious lest she should commit the fault again, yet it was almost a certainty that she would.

"Come here, Mary dear," said Aunt Lucy very gently, but with quite an indignant flush on her cheek. She began to unbutton the little dress and examine the make of the underwaist.

"Just as I expected, Sister," she said impulsively. "Here is this shoulder-piece not fitting at all, but every moment slipping down over the point of the shoulder in an aggravating way. What comfort would you take with a garment acting in that way? Poor little shoulder," she said, as she rubbed it gently with her soft, white hand. "Now Auntie will take a stitch or two here for the present, and will fix it better when you take it off. Don't that feel better? Now run and play, and after a while you'll get all out of the fashion of putting up one shoulder."

The little girl kissed her aunt gratefully, as she tripped away, much happier than she was a few minutes before.

"You should be ashamed of yourself, Sister," said the young lady energetically, when the child had gone, "to leave a child in such discomfort and then blame her for acting awkwardly. I have seen a mother scold her child for limping when she had on a shoe much too tight, or one with a nail in the heel that hurt her at every step. There is plenty of unavoidable suffering in this world without adding any needless pain to the burden. It is as little as we can do to make children comfortable when we expect them to be good and behave with propriety. Full two-thirds of the bad behavior of our children lies at the parents' door."

The remarks of her spirited young sister set Mrs. Lane a thinking more seriously than she has ever done before, on the duties of parents to make their children comfortable, and it is to be hoped the good results were seen in her after treatment of her little ones.—*Mother's Magazine.*

SALT WATER FOR THE EYES.—Many persons are suffering pain from weakness of the eyes. This, sometimes, proceeds from local inflammation, sometimes from other causes. Several persons who have thus been afflicted inform us that they derive almost immediate, and in some cases, permanent relief from the application of salt water as a bath; and when the pain has been aggravated, from a compress saturated with salt water laid on the eyes, and renewed at frequent intervals. Opening the eyes and submerging them in clean salt water has been found beneficial to those whose eyesight begins to fail.

TOBACCO.—Softening of the brain is a disease always connected with the use of nervines in some shape. Tobacco is a powerful agent in its production. Trembling is one of the usual symptoms of acute, and a common result of chronic nicotism. The Minister of Public Instruction in France issued a circular to the directors of colleges and schools, forbidding tobacco to students, as injurious to physical and intellectual development. Tobacco and insanity are closely connected. It is stated upon the best authority that of those who become insane from the supposed use of spirituous liquors, eighty-seven per cent. also use tobacco.

FARMERS AND RHEUMATISM.—Why are farmers so liable to rheumatism? Because they wear wet clothing, heat and suddenly chill the body, over eat after very hard work, and because they do not keep the skin in a vigorous, clean and healthy condition. If farmers would avoid suddenly cooling the body after great exertion, if they would be careful not to go with wet clothing and wet feet, and if they would not over eat when in an exhausted condition, and bathe daily, using much friction, they would have less rheumatism. The same rule applies to other than farmers. The Turkish bath is the best remedy for rheumatism. —*Science of Health.*

PLENTY OF SLEEP.—A medical man discoursing upon sleep, makes this remark: "One man may do with a little less sleep than another; but as a general rule, if you want a clerk, a lieutenant, a lawyer, a physicain, a legislator, a judge, a president or a pastor, do not trust your interest to any man who does not take on the average eight good solid hours of sleep out of the twenty-four. Whatever may be his reason for it, if he does not give himself that, he will snap sometime just when you want him to be strong."

BATHING AND EXERCISE GOOD FOR THE EYES. —William Cullen Bryant has the best eyesight of any man of his years in this city. It is well known that he bathes daily, and goes thorough sundry gymnastics with an invariable regularity, which ensures a remarkably good health. Is there no connection between those habits and the rare strength of his vision?—*N. Y. Letter.*

If any one considers what "farming is" or what it ought to be, they would come to the conclusion that farming ought to be the managing of land so as to keep it in condition to pay for occupation, and there will be many farms which will pay for occupation which will not pay for cultivation; that is, there are vast tracts of country which, from the nature of the soil, from the high price of labor and from its adaptability to remain in permanent actual grass, would pay exceedingly well to grsze with any kind of live-stock and by raising stock, dairying, fattening, and wool growing, etc., money could be made fast—this would be farming, and any system of cultivation and course of cropping on good, free working land, which would keep the land rich in plant food and allow of selling enough to cover expenses and pay interest on capital and also profit to occuppier, would be farming, and good farming too. Therefore it is easy to say what farming is; but robbing the land is not farming—it is running down of God's beautiful earth! And although many can purchase a fine tract of land and accumulate a fortune from the fine crops the new virgin soil produces, if they take crop after crop without some system of reimbursing it for the drain upon its productive powers, they are no farmers in a strict sense of the word, but real despoilers of their country's wealth and are deserving of repobation.

MR. WATTS lays much stress upon his efforts to introduce the ramie and jute plants into the Southern States and California. The public will agree with him that if their production proves as profitable as he anticipates, he has conferred a lasting benefit upon the nation. But the problems of their culture and manufacture have not yet been solved.

Porcine.

Pat and the Pig.

We have read of a Pat so financially flat
That he had neither money nor meat,
And when hungry and thin, it was whisp-
pered by sin
That he ought to steal something to eat.

So he went to the sty of a widow near by,
And he gazed on the tenant—poor soul!
"Arrah now," said he, "what a trate that'll be,"
And the pig of the widow he stole.

In a feast he joined; then he went to the judge;
For, in spite of the pork and the lard,
There was something within that was sharp as a
pin,
For his conscience was pricking him hard,

And he said with a tear, "Will your reverence
hear
What I have in sorrow to say?"
Then the story he told, and the tale did unfold
Of the pig he had taken away.

And the judge to him said, "Ere you go to bed,
You must pay for the pig you have taken;
For 'tis thus, by my soul, you'll be saving your
soul,
And will also be saving your bacon."

"Oh, be jabers," said Pat, "I can niver do that—
Not the ghost of a hap'orth have I—
And I'm wretched indade if a penny it made
Any pace for my conscience to buy."

Then in sorrow he cried, and the judge replied
"Only think how you'll tremble with fear
When the Judge you shall meet at the great judg-
ment seat
And the widow you plundered while here."

"Will the widow be there?" whispered Pat, with a
stare,
"And the pig? by me sowl, is it thrue?"
"They will surely be there," said the judge, "I
declare;
And, oh Paddy! what then will you do!"

"Many thanks," answered Pat, "for your tellin' me
that;
May the blessings upon you be big!
On that settlement day to the widow I'll say;
'Mrs. Finnegan, here is your pig!'"

The Berkshire Hog.

At a late State Fair in the East there was not one white hog exhibited. All were black, and either Berkshire or Essex. At the largest of the Western State Fairs, that of Illinois, nearly all the hogs were black, or black and white. This would seem to indicate the rapid growth of the black breeds in public favor, and of these the Berkshire takes the lead. As well indirectly as directly, for in the Poland Chinas of the West is seen, in the majority of cases, the Berkshire blood greatly predominating. The Berkshire has been most carefully bred for many years, starting from what was originally a large breed, possessing many good points, and of a black and white and yellowish spotted color. The improvement of the old Berkshire hog was begun in England by Lord Barrington, who died in 1829, and most of the best herds now trace back to this original improved herd. By careful breeding the yellowish color has been gotten rid of, and the white has been confined to the feet, a spot between the eyes, and in some cases a few white hairs near the shoulders, although there are herds in which these last white marks are entirely bred out. The Berkshire, as we now know him, is a moderately large hog, with a smooth, round carcass, broad across the shoulders, with well developed and round hams, a long, deep flitch, very fine, small, bony legs and feet, short face and snout, and covered with a good coat of long, silky, black hair. In many good Berkshires the bluish or slate-colored tint and thin hair of the Neapolitan hog, which has been crossed upon it, is very conspicuous, but it is a question if the black, well-haired animal is not the more vigorous and thrifty sort. One of the chief characteristics of the Berkshire is the evenness with which it breeds. At the exhibitions and in the breeders' yard whole litters may be seen that scarcely vary from each other, and hardly to be distinguished one from another in appearance, and pen after pen may be examined without any marked variation, excepting in those cases in which, as already noted, the Neapolitan cross is apparent. After fifty years of careful breeding, this is not more than might be expected, and the result appears in an animal which, on the whole, is probably the most profitable to the breeder, the feeder, the butcher, and the packer. There is no pig that is more useful to the man who keeps but one, and more to the farmer who feeds a hundred, if the amount of meat in proportion to feed consumed be considered. There is more lean in proportion to fat than in most other, if not in all other breeds, and the bone and offal are very light. The black color is not only skin deep, but the color lies in the outer skin, which is all removed by scalding, and a Berkshire ham is not to be distinguished from that of a white hog if the hair has not been left on to tell the story. It is no little evidence of its good qualities that the Berkshire has become so rapidly popular, in spite of the prejudice against its color, as to supplant, along with the Essex, all the white breeds at one of the most prominent Eastern States Fairs.—*Home Journal.*

Breeding Swine.

The present rage among American pig breeders to possess animals of pure blood, whether in the Berkshire, Essex, Suffolk, or any other breed, while likely to prove ultimately of general benefit to the stock of swine in the country, is far from being the end to which breeders should aim at. As a general thing, very few pigs are really thoroughbred, and now in England, from a well-known tendency of the hog to degenerate and become enfeebled in constitution, the moment the refining process through in-and-in breeding is carried beyond a limited point, it will be well for breeders to consider if it is not more to their advantage rather to breed for feeding purposes, than to aim at getting fancy prices for fancy animals of a certain fixed type. It has been proved time and again in Britain that the cross-bred pig is the one for profit in the pen. What is wanted is to have good blood in the males, with sufficient of bone and smallness of offal, to ensure early maturity and quick feeding. Cross these males on sows of a larger and coarser frame, with sound healthy constitution, and we obtain a pig that is a good way ahead of the common sort. By keeping to the use of well bred males, selected with a view to possessing the points that go to make up a fine pig, without regard to color or fancy points in markings, we get healthy thrifty pigs that will readily attain fair weight at an early age, on a moderate amount of feeding.

Experience in pig breeding teaches that it is better to use small but thoroughly well-formed boars that are quick, easy feeders of their breed, rather than larger ones, and never to use the same boar more than one year. The boar in all cases should be smaller and finer than the sows to which he is put. —*English Paper.*

What Constitutes a Good Pig.

The *American Swine and Poultry Journal* says: We would not speak of any particular breed, but would generalize; as what can be said of a good pig of one breed holds equally good of one from another breed, if we except the size, shape, position of ears, tail, etc., and marking. A good pig is one that has the smallest proportionable amount of offal; whose nose, feet and tail are shortest, generally speaking, and smallest, consistent with proper locomotion, etc. A good pig is one that has heavy, broad hams, good deep chest, showing a healthy constitution; which has a quiet disposition, yet one which is always ready to get a square meal, and which can digest and assimilate all it eats in the quickest possible space of time without impairing the digestive organs. We do not want a pig which has a small appetite, but one that eats all that is given it with an evident appetite. The profit consists in getting your grain and other food rapidly converted into pork; the quicker the better. Never bother much with a restless pig, for a quiet one, with the same chances in his favor which the restless one has, will soon outstrip him in the race for fat and pork.

Grapes Make Pork.

Says the *Foothill Tidings:* In a recent conversation with our old friend Thomas Payne, whose fine farm and vineyard is situated on the Colfax road two miles from town, we learned that he had been trying the experiment of feeding grapes to hogs. He says he finds the practice all and more than has been claimed for it—that the pigs eat the grapes with avidity and are taking on flesh rapidly. There is no excuse for the miserable shiftlessless of the farmers of the foothills of California which compells the importation of pork and lard from Illinois and Iowa. With rye and grapes, two crops that can be easily raised here, and with never a failure, we can produce pork here at a less cost of labor than can be done there, and save all the freights and profits while the money is kept at home.

Short Hog Crop.

It has been a long time since we have had so short a hog crop in the West, says the *Rural World.* Several causes have contributed to it. The severe drouth of last year and the year before, and the chinch bug and grasshopper invasions, made corn scarce and high, and but few hogs were kept over Winter. The high price for pork last year caused every available hog to be fattened and slaughtered. Then there has been a great mortality in hogs, caused by what is known as hog cholera. All of these matters have decreased the number of hogs, and good prices can be commanded if the farmers will stand firm and not be in too much haste to slaughter.

"My onthankful hearers," said a backwoods preacher, "you air like onto hogs eatin' acorns. They never look up to see where the acorns come from."

New Peat Fuel Company.—Articles incorporating the Santa Clara Valley Peat Fuel Company have been filed in the office of the County Clerk. The capital stock is placed at $1,500,000, divided into shares of $100 each. The Company will have its principal place of business in this city, and its term of existence is fifty years. A certified copy of the articles of incorporation has been transmitted to the Secretary of State. The Directors are all of this city, and are as follows: Samuel A. Bishop, J. H. L. Tuck, Cuthbert Burrel, J. H. Elwood, and Edward McGowan.

How to Stop a Newspaper.—Do not leave it to your friend who is going to town. Do not leave it to the Postmaster, unless you know he is a prompt, reliable man; but send a notice by letter or postal card to the publisher, *giving the address to which the paper is sent,* and your order will receive prompt attention.

A farmer from Lake Washington informs the Seattle *Tribune* of the 19th that he had raised onions on his place this season at the rate of 1,450 bushels to the acre. Nine and ten hundred bushels are claimed every year for various parts of the Territory.

Since the rain the atmosphere is pure and balmy and men's minds are clearer. One man who had owed us for four years, came in and said he would pay us as soon as the next crop of wheat comes off, showing the beneficial effects of a gentle shower on the mind.—*Pajaronian.*

Pisciculture.

FISH.

And What the Fish Commissioners Have Done to Stock our Waters.

FROM the 36-page pamphlet which forms the biennial report of the California Fishery Commission, we glean the following information of great consequence to ichthyophagists:

In 1874 the Commissioners telegraphod to Livingston Stone to prepare another aquarium car to take the place of the one destroyed by the breaking of a railroad bridge over the Elkhorn river in Nebraska. He was also instructed with reference to the varieties of fish to be brought across the continent. He arrived June 12, 1874, having succeeded in transporting safely seventy-three full-grown spawning black bass from Lake Champlain, which were placed in Napa Creek; twelve small black bass from St. Joseph's river, Michigan, which were placed in Napa and Alameda creeks; sixteen full-grown glass-eyed perch from Messisquoi river, Vermont, which were placed in the Sacramento river; seventy-four catfish, which were placed in the San Joaquin river, near Stockton; seventy horn pouts, from Lake Champlain, which were deposited in lakes at Sutterville, Sacramento county; three hundred small Eastern salmon, obtained from the Penobscot river, Maine, were placed in the Sacramento river, near Reading; four full-grown rock-bass from the Missisquoi river, which were deposited in Napa Creek. Of salt-water fish there arrived twenty-three tautogs, or black fish, which were deposited in the Bay of San Francisco. Of the one hundred and fifty full-grown lobsters, with which Mr. Stone started, only three lived through the journey. The details of Mr. Stone's experiments in gathering and transporting these different varieties of fish are appended to the report, and form a valuable contribution to the new science of fish culture.

THE IMPORTATIONS.

Of the new varieties of fish thus introduced into the waters of California, the Commissioners are convinced that the greater number have found congenial homes and have spawned. During the present season black bass have been caught in Napa Creek, and large numbers of the young have been seen. The catfish placed in the San Joaquin river have grown rapidly and spawned. The hornpouts, a species of small catfish, which were placed in the lakes near Sacramento, have increased so abundantly that nearly one thousand have been caught. None of the Eastern salmon have been seen since they were placed in the Sacramento river. Without doubt they have gone to the ocean, not to return till the Spring of 1876. The report maintains that this experiment in the importation of new varieties of fish is so great a success that the people of the State are already amply repaid for the small amount expended in the undertaking.

WHITE FISH.

From the Eastern States the Commissioners received twenty thousand white fish eggs from Lake Champlain, and besides they purchased in New Hampshire sixty thousand eggs of the Eastern brook trout. The twenty-five thousand white fish eggs received from the Government in 1873 were successfully hatched and placed in that body of water. Inasmuch as Clear Lake seemed to be well stocked with these fish, the Commissioners thought it advisable to place the last donation in Tulare Lake. The Regents of the University permitted the erection of a small hatching house on the banks of the stream at Berkeley, where, under the supervision of J. G. Woodbury, these eggs were successfully hatched.

SALMON.

The largest establishment in the world for the hatching of salmon eggs is that belonging to the United States, on the McCloud river, in Shasta county, under the superintendence of Livingston Stone. At this point from six to ten million of young salmon are hatched each year and distributed to the Fish Commissioners of the various States having rivers suitable for their growth and increase. In 1873 California received from that source half a million fish, which were turned into the Sacramento river. The Government works at this point are so extensive, and conducted with such economy, that it is found that the total cost of hatching one thousand fish from the egg is but one dollar. On this subject the report says: We have thought it to be of so much public importance to increase this valuable variety of fish in its native waters, that during the past year we considered it advisable to expend $1,000 in the hatching of one million more fish, to be placed in the Sacramento river. We therefore applied $1,000 of our appropriation to this purpose, and the fish have been successfully turned loose. Our appropriation being about exhausted, we will this year pay for the hatching of but a half a million more fish.

SEA LIONS AND SEALS.

For many years the sea lions and seals which inhabit the cliffs near the entrance to the Bay of San Francisco, have been preserved by special enactment, and penalties imposed on any person who should kill or disturb them. The result is, that they are probably now a hundred times as numerous as they were ten years since, and are to be found there in thousands. When it is considered that they weigh from two to five hundred pounds each, and that they each consume at least from ten to twenty pounds of fish daily, it will be readily seen that the quantity caught at the entrance of the harbor and in the Bay of San Francisco by fishermen, is small in proportion to that consumed by these animals. If allowed to increase at the same rate for a few more years, it will be difficult for either shad or salmon to escape them while entering our bay. The fishermen at Vallejo and Rio Vista report that they find many of the salmon to have been torn by the teeth of these animals. They appear now to have no useful purpose other than to gratify the curiosity of strangers, and we believe it would be well if the law which now protects them was repealed and nine-tenths of them allowed to be shot, that their oil might be utilized in the lubrication of machinery. We would recommend that this law be repealed, and, if necessary, again re-enacted after nine-tenths of them had been destroyed.

THE STATE APPROPRIATION.

The Commissioners believe that if the Legislature, instead of giving them a mere pittance of $2,500 a year, were to make an appropriation of $6,000 or $10,000 a year, so many salmon could be hatched and deposited in the Sacramento and San Joaquin rivers that after three years the fish would be so numerous that they would compel the erection of extensive canning establishments on those rivers, as there are now on the Columbia. In conclusion the Commissioners say: The observations we have made upon the food fish of our rivers, and the statistics we have gathered from various sources for the information of those who are interested in the science of fish culture, have involved a large amount of labor, which, on the part of your Commissioners, has been altogether gratuitous. A liberal appropriation by the Legislature will enable us to extend our operations and carry out to completion the objects for which this Commission was created. We feel that the work we are engaged in, and in the promotion of which we are willing to devote our time and labor in the future, is deserving of a more liberal support from the State than it has hitherto received.

CALIFORNIA PISCICULTURE.—Early in the Summer of 1873 Mr. Livingston Stone, the eminent fish-culturist, established his first salmon-breeding camp on the McCloud river, away in the north of California. The picturesque river so swamed with salmon that from his tent-door he could see them jumping "at the rate of a thousand an hour!" His intention was to erect a hatching-house and then forward the eggs to the Northern, Middle and Eastern States. At first the Indians were troublesome and showed their dislike of the intention in several unpleasant ways; but finding that they lost nothing and gained much by the establishment, they in time became Mr. Stone's most valuable assistants. The upshot of his venture was that on the 26th of August, 1873, he took from the captured fish twenty-three thousand eggs: and by the 22d of September he had secured more than two millions. Of this number, we learn from the last or seventh annual report of the operations of the Commissioners of Fisheries for 1874, over a million and a quarter reached New York, New Jersey, Pennsylvania, Michigan, New Hampshire, Connecticut, Maine and Utah alive. The consignees were the Fish Commissioners of those States, to the rivers of which they were in due time transferred. The mode of packing the spawn was to place them in moss contained in boxes two feet square by a foot in depth, the covers were firmly screwed down, and so they were sent off on their perilous journey of three thousand miles.

In addition to the Commissioners of Fisheries, there has been established in New York a very important body entitled the "American Fish Culturists' Association." The object of the Association is, by the transportation of ova, to advance the fish interests of the various States. *To* California this has meant the gain to her waters of the shad (which stand at the head of the herring family) and the lobster; whilst *from* California nearly all the other States of the Union have been supplied with a market dainty at a reasonable price, the salmon, to wit: From our teeming rivers the waters of the other States have been stocked with the ova of this splendid fish, and now there is not a city on the Atlantic board but has its season of fresh California salmon.

FISH FOR THE CENTENNIAL.—Since the appropriation by Sweden of $100,000 for the sole purpose of exhibiting the fish of its waters at the Centennial, the zeal of the United States Commissioners in that direction, in the interest of their own country, has greatly increased. Professor Bayard, of the Smithsonian Institute, is at present engaged at Wood's Hole, Mass., in making an exact counterpart in plaster of Paris of every species of fish that swims contiguous to the United States. A mould of the fish is first taken, afterward the copy is painted directly from the originals. Mr. Eugene Blackford has at present at Fulton Market three specimens of this work, which were sent him as a compliment by Prof. Baird, who has received from Mr. Blackford 300 different species of fish for the advancement of science, at the Institute which he represents.—*American Grocer.*

A BUSINESS man's advertisement, in his own language, over his own signature, and for which he is plainly responsible, is in the nature of an official document, and receives more considerate attention than a puff in the local column, and is both more valuable and respectable. There is an air about the responsible advertisement which says: "I want to trade, and will give you a fair bargain." The puff insinuates that there is no responsibility in the matter.

A TRUE journalist aspires to uplift his neighbors, to encourage the pursuit of good and to check all that inclines in an opposite direction; and the natural disposition to evil is so strongly developed in man, that ordinarily he finds himself engaged in hostilities in which there is but little lull.

Educational.

Self Made.

HIS star of fate, to common eyes,
Seemed very small and dim;
And few the angel visitants
That sung the natal hymn!
But in that little feeble frame
Was lit a fire divine;
Destined to burn its bright way out,
To all the world a sign!

"Self-made!" No land to build upon,
Except the rock of trust!
No helpers, save one's own brave hands
And will, that cry "We must!"
Proud energy in every limb,
And in truth every glance
Of eyes that straightway seek your own,
As warriors throw the lance!

Nature (dear mother) waxes kind
To children all her own;
And often gives them wealth of blood
Add wondrous nerve and bone!
No pampering dries their sinews up,
No selfish, needless care
Relaxes muscles that are made
Life's burdens well to bear!

"Self-made!" The world has need of such
To plow her mighty seas!
To drive her commerce and her trade,
And catch each prosp'ring breeze!
As years gone by such noble souls
Have worked, nor worked in vain,
That "knowledge might run to and fro
The earth," an endless chain!

Do Agricultural Colleges Make Farmers?

It has often been asserted by those who are opposed to Agricultural Colleges, and especially those who object to having any State money expended in this direction, that the colleges do not turn out farmers—that a college course tends rather to turn the graduate from, than towards the farm, when his studies are finished.

In his address before the Legislature, President Abbot, of the Michigan Agricultural College, alluding to this oft-repeated assertion, makes the following statement regarding the policy pursued at the institution and the results attained thus far:

"It has been the design, says the President, of those who manage the Agricultural College, to create a bias towards, and not away from the farm; to make the whole atmosphere of the place one of respect for all kinds of work, and a feeling of fellowship toward farmers. To this end manual labor is insisted on from all, if we can speak of insisting on what students offer in excess of our requirements. To this end there is no furnishing of easier or more tasteful work to the seniors than is given to other students; the habit of work and taste for it is kept up to the end. To this same end the labor system and the instruction are planned to match each other, to illustrate each other, so that to the labor is given to some of the dignity of scientific work, and to the scientific instruction labor serves as a kind of laboratory practice for instruction.

The result of these efforts to create a truly agricultural school, appears in the fact that in place of 1½ per cent. of graduates going to farming, as from other colleges, 38 per cent., or, not counting those not living and those who are still students, 42 per cent. have gone to farming, fruit raising, and the nursery business as their chief or only business. In this respect the college is doing what has never been done before—sending men with good education in fair proportion back to work farms.—*New England Farmer.*

Agricultural Colleges in France.

Considerable attention has been drawn of late to the various agricultural colleges in this country, and the comparatively small percentage of pupils in them who devote themselves after graduation to agricultural pursuits. The utility of institutions which do not really foster the industry in whose behalf they are established has been questioned, with some reason, and a discussion has arisen in consequence which is likely to bring out the defects in the institutions we have, and possibly make them generally useful. As bearing upon this subject, certain statistics have been published relating to the agricultural colleges or "farm-schools" of France, with a view to showing that the difficulty complained of is not confined to this country. There are in France 33 farm-schools, with 862 pupils and 9,317 graduates. Of these graduates 2,992 have become farmers, owners and cultivators, or renters of farms; 845 have become gardeners, market gardeners or florists; 46 have become drainers, irrigators or makers of drain-tiles; 841 farm laborers, cow-herds or pig-feeders; 5 land-surveyors; 16 foresters and game-preservers; 29 agricultural accountants; 39 merchants in grain, wine or fertilizers; 38 farm directors; 15 veterinary surgeons; 19 students in agricultural colleges, and 104 belong to other employments connected with agriculture. From these figures it appears that about 44 per cent. of the pupils engage in what may fairly be termed agricultural pursuits. Although this proportion may seem much smaller than desirable, there is only one college in this country, that in Michigan, which makes an equally favorable exhibit.—*Ex.*

Influence of Newspapers.

The *Boston Traveler* states that a school teacher who had the benefit of a long practice of his profession, and had watched closely the influence of a newspaper upon the minds of a family of children, gives as a result of his observation that, without exception, those scholars of both sexes and all ages who have access to newspapers at home, when compared with those who have not, are:

1st. Better readers, excelling in pronunciation, and consequently read more understandingly.

2d. They are better spellers and define with ease and accuracy.

3d. They obtain a partial knowledge of geography in almost half the time it requires others, as the newspaper has made them familiar with the location of important places and nations, their governments and their doings.

4th. They are better grammarians, for having become familiar with every variety of style in the newspaper, from commonplace advertisements to the finished and classical oration of the statesman, they more readily comprehend the meaning of the text, and consequently annalize the construction with accuracy.

The Horse.

Horse Racing at Our Fairs.

VERY conclusively the present year has shown the effect which horse-racing and pool-selling has had upon all our County and District Fairs, and upon our State Fair also. Whoever has attended these fairs and witnessed the scenes enacted at these places—the gambling tables in full blast unchecked, the large amount of drunkenness and blasphemy witnessed, the disputes and quarrels seen, all the very outgrowth of the race-track, must see and be convinced that the time has come when a change must be made at our fairs—either the horse-race must be abandoned or our Agricultural Fairs must be given up wholly, this is certain. The general dissatisfaction expressed this year shows that the people are in earnest for a change in the management of fairs, beginning with the State Fair, and thus revolutionizing the plan of all our fairs. The fairs that have been held this year have been complete failures, and so far from any benefit or improvement to our farmers and their children, they have been the source of disgrace to every place where fairs have been held. We shall here except from the list of fairs thus far held this year, the Santa Clara Valley Fair, held at San Jose,—*Cal. Farmer.*

Now, if we wish to breed for a profit, we must breed what the demand calls for. There is a certain demand for heavy horses, but it is not among the high priced men of the present day. They want symmetry, style, beauty in appearance, and a good stepper. Such horses are always in good demand at good prices; and by breeding to perfect all points we produce muscle and endurance, and horses thus bred will endure greater hardships. They are medium hight, will draw all the load necessary for any farm team to draw, and when we hitch to our road wagons they will glide along with that loftiness of spirit which nothing but a well bred horse will show, and it is generally conceded by our best breeders that the medium size, well bred, is the better horse for all purposes. A horse that will weigh from eleven to twelve hundred pounds, fully developed, of good breeding, is of sufficient weight, and is worth buying, and is also worth keeping.—*Farmers Union.*

BRIDLE-BREAKING.—To cure a horse of bridle-breaking, get a piece of bed-cord, four times the length of the horse, and double it in the middle, and at the double end make a loop, through which pass the animal's tail. Then cross the cord over his back, and pass both ends through the halter-ring under his chin and tie both ends of the cord to the trough-ring through which the halter-strap plays, the end of the halter being attached to a billet of wood. Should the horse attempt to pull back, the strain will all be on the root of his tail before the halter-strap will become tightened, and he will at once step forward to avoid it. After so fixing him a few times in the stable he will abandon any such propensity.—*Canada Farmer.*

KEEPING HORSES' FEET AND LEGS IN ORDER. If I were asked to account for my horses' legs and feet being in better order than those of my neighbor's, I should attribute it to the four following circumstances: First, they are all shod with few nails, so placed in the shoe as to permit the foot to expand every time they move; second, that they all live in boxes instead of stalls, and can move whenever they please; third, that they have two hours' daily walking exercise when they are not at work; and fourth, that I have not a head-stall or trace-chain in my stall. These four circumstances comprehend the whole mystery of keeping horses' legs fine, and their feet in sound working condition up to a good old age.—*Miles.*

GLANDERS.—Following is the ordinance in existence with reference to glanders in horses in San Francisco: Section 14—Any person who shall keep or have in his possession, within this city and county, any horse afflicted with the disease known as the glanders, shall, within twenty-four hours after having knowledge or being notified thereof by any person, kill and bury the same, or remove it without the limits of the city and county. Any person who shall violate any of the provisions of this section shall be deemed guilty of a misdemeanor; and upon conviction thereof shall be punished by a fine of not less than fifty not more than five hundred dollars, or by imprisonment in the County Jail not less than twenty-five days nor more than six months, or by both fine and imprisonment.

MANY horses are ruined by harsh treatment when they are colts. Their dispositions are soured, and they come to look on man as a demon and an enemy. Teach the colt by every act that you are his friend. Be kind to him always, and you will gain his confidence to that degree that he will always obey the word when he understands your meaning.

Sheep and Goats.

The Angora Goat Business East.

THE following which must prove of interest to all wishing information on this subject, we clip from the *Prairie Farmer:*

A correspondent residing in Wayne County, in this State, recently enquired for a house in Chicago or elsewhese, that deals in the fleece of the Angora goat; about how much per pound the product is worth; if the goats can be made to pay in Illinois, and if they can be prevented from climbing fences and barking fruit trees.

We sent his questions to Col. Robt. W. Scott of Frankfort, Ky., for answer believing that he knew more about those animals and their future than any one we know of. Mr. Scott kindly replied as follows:

I reply, with pleasure, to your favor of the 29th ult. and as fully as permitted by infirm health, and by being on the eve of departure to my winter home, near Fort Reid P. O. Orange Co., Florida, from which if desired, I will reply more especially to your correspondent.

During the last fifteen years, I have built up a flock of several hundred Cashmere (or more properly Angora) goats; all of which are now either pure bred, or full blood. For about ten years the mohair, or wool of them, has been sold for me on commission, by Messrs, Bauendahl & Co., extensive wool merchants, of 86 Worth street, New York. It has met with ready sale at prices varying from seventy-five cents to one dollar and a quarter per pound, as shorn; and for the last two years has been sold by them at ninety, and ninety-two and a half cents per pound, the price fluctuating some, as with other commodities, and according to quality and condition.

I have also sold some to A. P. Bachman, manufacturer of superior plush goods, at 18 Franklin St., New York.

I have also had application for the sale of it by Messrs. Justice, Bateman & Co., enterprising and reliable wool merchants, of South Front street, Philadelphia, Pa. Besides other parties, I have had also extensive correspondence with the "Jamestown Alpaca Mills," at Jamestown, New York, and in one of their letters they informed me, two years since, that they had brought from England, extensive capital, skilled laborers, and appropriate machinery, and had located on an extensive tract of land, and were prepared to manufacture three hundred thousand pounds of mohair or Angora wool, annually, if they could obtain suitable material. I received a letter from this Company last spring, desiring to purchase my mohair, but it had been sent to my usual merchant.

I have been reliably informed that there is a factory which uses mohair in Providence, R. I., and one also in Worcester, Mass., but I have not been able to correspond with them. It is certain that there is now unlimited demand in the United States, and that there will be in all time to come, for all of the mohair of good quality which we can produce, and at prices which will pay the producer better than sheep's wool of any kind will. Its superior lustre, elasticity, durability and capacity to take color, make it the most desirable material for the manufacture of coverings for car seats, and this use alone will sustain an unlimited demand.

To command the best price, it should be free from *kemp* (the coarse *hairs* which the goat wears in summer, when the *mohair* has been shed), burrs and trash, and each fleece should be tied up seperately with a small colored thread.

The *kemp*, or coarse *hair*, is found also in the fleeces of low grade animals, and it reduces the price in proportion to the quantity; but mohair containing it will always sell at least at the prices of coarse sheep's wool, it being better adopted to the same uses as coarse wool.

Your correspondent asks, "Can they be prevented from climbing fences and barking apple trees?" and I reply that these capacities and tastes make them especially valuable, and they must be controlled and not destroyed, where they cannot be indulged. But clogging or coupling will prevent them from climbing, and a wire muzzle will prevent them from barking trees, &c.

But there is also another and more practical means of preventing both of these, viz.: by having good fences. A fence of common rails, seven or eight rails high, and staked and double ridered, with corners all erect and not leaning, and with the rails all of equal length, will hold them securely, and so will a post and rail, or a plank fence, five feet high, if the fences are in good order. Goats do not *break* fences of any kind, but only take advantage of the negligence of the farmer, where other animals have broken them. They will eat, and in course of time, will destroy a hedge of cedar, or of Osage orange, if they have access to it at all times. A stone fence may be made goat proof by placing pieces of scantling or plank, about two feet long, across the top of the wall and then nailing to them strips of plank on each side of the top of the wall, which strips will strike the goat in the face when he attempts to run over the wall. I have hedges and fences of all these kinds, and my goats are kept in several flocks, and, at some time of the year, in all of the different fields and pastures of a large farm, and they are useful in consuming the wild bushes and briars, the cutting of which by hand would require more time than any extra trouble to keep the fences in good repair at all times.

Though a goat does not produce so heavy a fleece as some sheep do, yet because goats consume a great variety of courser feed than sheep do, goats will produce as much or more wool than sheep will from the same quantity of ground, and the goat's fleece will sell at nearly double the price per pound of the sheep's fleece, and the same may be said of the flesh and skins of the two animals.

From these data your correspondent may judge of the propriety of raising the wool-bearing goat in Illinois, though the more appropriate locality may be in the prairies of Texas and in the mountains of California, in both of which states the taste and demand for them is largely on the increase. Though I have disposed of more than one hundred head this season, I yet have respectable flocks of both pure, and of full bloods, and I find them profitable, even in this blue grass region, where lands are high comparatively.

ROBERT W. SCOTT.

Near Frankfort, Ky., Nov. 4, 1875.

Foot Rot in Sheep.

As there are getting to be more and more cases of foot-rot among sheep on this coast particularly in Oregon and in Mountain Meadow valleys, and we have been asked for advice on this subject we think that we can do no better than to give an article on this disease from the *National Live Stock Journal*, which is good authority:

Usually the first intimation the shepherd has of the presence of foot-rot is the limping of the affected animals. If the sheep had been carefully examined before this, there would have been noticed in the cleft of the foot, just above the horny covering, a moist irritated appearance, omitting a peculiar disagreeable odor. This is usually present several days before lameness is manifested. The disease, from this first stage, usually passes under the shell of the hoof, at the heel, gradually working and widening until the entire foot is affected, unless arrested by artificial appliances. A feverish condition of the entire foot is apparent, when taken in the hand. Occasionally a foot may be found that has ulcerated, as the effect of injury from some cause or other: but the peculiar odor that is inseperable from the foot-rot is wanting.

There has been much discussion as to the origin of foot-rot, some flock-masters contending that it originates from continuous confinement in foul pens of stables, or by pasturage on low, swampy grounds. As this is a question upon which the "doctors disagree," we will not enter upon its discussion here, but relegate it to the experience of the readers of the *Journal*, with the remark that, in a pretty expensive experience with large and small flocks of sheep, we have never met with a well defined case of foot-rot that was not traceable to contact with diseased animals. The determining of the possibility of engendering the disease by confinement upon foul floors, and by neglect, has a certain value from a scientific standpoint—and we will be glad to get experiences tending to prove the fact or fallacy of such a theory. Practically considered, the flock-master is contented with the knowledge of the rule that, to keep his sheep free from the possibility of contact with the presence or walks of affected animals insures them exemption from foot-rot. The exceptions to this will be found so rare that they need not excite solicitude.

The actual presence of foot-rot in the flock determined, the question of the hour is, not so much how came it there, as how it is to be eradicated. Before discussing any of the numerous remedies proposed, all affected animals should be picked from the flocks and confined so as to render impossible further spread of the disease by inoculation from them. As fast as further cases are noticed—as most likely there will be—these, too, must be culled out. Unless this course is pursued, a large proportion of the animals in the flock will, in time, be affected. The next step is to get the healthy animals off the ground frequented by the diseased ones—and to keep them off for several weeks at least. until sun and rains have thoroughly purified the surface and herbage. As soon as possible every animal in the flock should be examined carefully—every foot being scraped and trimmed, when necessary. Let this be thoroughly done, as the animal neglected may have about it the seeds of disease that will in time render all work unavailable—for of foot-rot it may truly said that "one sickly sheep infects the flock and poisons all the rest." As the sheep leaves the hands of the operator it should be placed in a trough filled to the depth of two inches with a decoction of blue vitrol, and be made to walk through this while passing out of the pen. This will tend to destroy any trace of the disease that may have escaped the eye of the operator. Such trough should be eight to twelve feet long, so that each foot will be immersed several times. This process should be repeated at the end of a week or ten days at the farthest, and if repeated a second and third time will only make "assurance doubly sure."

The diseased animals having been separated, should receive immediate attention. The outfit for the operator should consist of a pair of toe-shears, two sharp knives (one heavy one for removing the outside of the the hoof, and a smaller one, with a keen edge, for the more delicate work), a sponge, or cold cloths, for removing blood, and a small bottle of butyr of antimony, or some equally good caustic, for application when the work of the knife has been thoroughly performed. The knife will be found the sheet-anchor of success in treating foot-rot. The last vestige of disease must be cut out—even though it involve the removal of the entire horny covering of the foot. Any less heroic treatment may mitigate, but will not cure the disease. When the diseased portions of the foot are thus laid bare, and as much of the *pus* wiped away as can be done without irritating the exposed parts, the butyr of antimony, or other caustic, should be applied with a soft brush or swab made by tying a piece of

old linen or cotton cloth to the end of a stick. Unless the disease has been present for some length of time, usually but one foot on each animal will be affected, though the sound ones should be cleansed (never using the same knife as on the sore felt,) and treated to an apptication of the caustic as a precautionary measure. But a few days should be allowed to intervene before these invalids are carefully examined—great care being exercised to ascertain that the work has been thoroughly performed. If any of the virus was overlooked in the first operation it will now be apparent. The knife and caustic must again be applied; and this vigilance continue to be exercised until all the once affected animals are the possessors of sound, healthy feet, when they may be turned with the flock.

Though, as above intimated, it has not been demonstrated that certain flouI and otherwise unfavorable surroundings originate foot-rot, there can be no doubt that such conditions favor its rapid spread, and renders its eradication next to impossible. Such surroundings will be avoided by the experienced flock master at all times. Even the instinct of the sheep will lead them to shun such, while seeking either food or rest.

Precautions against contracting the disease should be used by flock-owners when infected animals are known to be in the vicinity.—These may consist in great care that no animal from the infected flock be allowed to mingle with or cross the range of the healthy sheep; a rigid examination every few weeks, of the feet of the entire flock, as indicated above, and the passage of each animal through the trough of diluted vitrol; and great care that all additions to the number, such as stock rams and choice ewes, are from flocks and neighborhoods exempt from the malady.—Here an ounce of prevention will be worth a good many thousands pounds of cure; for we esteem foot-rot the worst enemy the flock master has to contend with when once it gets headway. Its eradication from large flocks is not an impossibility, but necessitates more watchful care and persistent labor than the average farmer finds the time, or possesses the disposition to bestow.

Apiary.

SILAS HIVING BEES.

How He Expected to Do It, and How He Didn't.

The old gentleman's name is Silas, and that of his eldest son is George; his wife's name is Matilda, and his three pretty daughters are named Helen, Alice and Susie; there is a little Silas, too, and an older boy whose name is too queer to mention.

The bees had alighted in a great bunch, as large as a half-bushel measure, on the limb of a peach tree in the yard. A table is placed under the overhanging limb, spread with a clean white cloth, and the hive placed thereon.

Then one of the boys, one that is good for nothing else, is sent into the tree to sever the limb; the limb comes down slowly and easily, and the old gent below, dressed in a great coat, buckskin gloves, cowhide boots, and a bed quilt tied around his neck and face, slyly manipulates a twig from the tree, and in two minutes has safely coaxed every bee into the hive, during all of which time Matilda and Helen and Alice and Susie pound the bottoms out of just four tin pans; little Silas does his prettiest yelling, while the boy with the queer name is just old enough and sharp enough to slip behind the house and wait for the thing to come to a point. That is the way the thing ought to have gone off; but that isn't the way it did. Silas, the elder, was very comfortably bundled up for so warm a day, and he had his suit well arranged, only he forgot to tie the strings around the bottom of his pants legs.

The bees had settled on the limb of a peach tree, and Silas, when his table and white cloth and his hive already, commanded:

"Now, George, grab that old rusty saw and climb; I guess you can cut that small limb off easy enough."

George was just home from a six month's term of school, and he felt a great tenderness for his father, and would have gone through a patch of thistles bare foot to please the old gent, and yet he had a particular dread for the "business end" of a bee, and particularly of such a crowd of them. But he obeyed, and began to fiddle away cautiously upon the particular limb. One little bunch of bees dropped off and were caged; another, and another small bunch dropped, and the prospect seemed good, when suddenly an old honey-maker appeared, who had been in the business, soared upward. George shut up one eye quick, gave one terrific surge on the old rusty saw, got out of that tree at one jump and his anxious mother caught a glimpse of him as he flew around the corner of the barn twenty rods away.

But poor old Silas! The bees came down, and he thought the bunch was as big as a hay-stack now. They did not go into the hive, but they went through his over-coat and bed-quilt as if these had been only mosquito bars, and they climbed up his pants legs, and the old gent danced as he had never danced before; and he slapped his legs, as he had never allowed any one else to slap them, and his voice towered high above the clatter of the tin pans and the shrieks of little Silas as he yelled:

"Throw water on me! throw water on me! soak me, wet me down!"

He rolled three or four times over in the grass, and sprang up, shouting, "slap me! slap me! Can't you slap me?" in the midst of which little Silas crept up behind his infuriated papa and dealt him a lively one with a shingle; but poor little Silas landed the next second against the milk-house, for his pa took him and his shingle for a thousand bees, and gently brushed them off.

Oh, the agony of that three mitutes jig! He appended to his wife.

"Matilda, for heaven sake, bring me another pair of pants, won't you!"

But these things don't last always, any more than any other happiness, and after a few minutes the old gent came limping out of the cellar with the breeches on that Matilda brought him, feeling quite easier, but certainly much fatigued, just as George got back from the barn and the boy with the queer name slipped around the corner of the house. Both boys were to anxious know how matters stood, and asked:

"Did you git 'em hived, pa?"

But the old man was too mad to answer, or even look at his boys. He turned to Silas and said:

"Little one you meant all right, and I'm sorry I cuffed you so; next time don't slap so hard."

Then to his wife, "Matilda, to you I owe everything. Accept my heartfelt gratitude. We'll take no more stock in bees. I have made up my mind, and its settled, May our quiet, peaceful farm home never be so stirred up again. Seems to me I never had so much of life crowded into a few short minutes before. Run after the cows now, boys; be off for its almost dark."

Why Bees Work in the Dark.—A lifetime might be spent in the mysteries hidden in a bee-hive and still half the secrets would be undiscovered. The formation of the cell has long been a celebrated problem for the mathematicion, whilst the changes which the honey undergoes offer at least an equal interest to the chemist. Every one knows what honey fresh from the comb is like. It is clear, yellow syrup, without a trace of solid sugar in it. Upon straining, however, it gradually assumes a crystalline appearance—it *candies*, as the saying is, and ultimately becomes a solid mass of sugar. It has not been suspected that this change was due to a photographic action; that the same agent which alters the molecular arrangement of iodide of silver on the excited collodian plate and determines the formation of chaunphor and iodine crystals in a bottle, causes the syrup honey to assume a crystalline form. This, however, is the case. M. Scheibler has enclosed honey in stoppered flasks, some of which he has kept in perfect darkness, whilst others have been exposed to the light. The invariable result has been that the sunned portion rapidly crystallizes, whilst that kept in the dark has remained perfectly liquid. We now see why bees are so careful to work in perfect darkness, and why they are so careful to obscure the glass windows which are sometimes placed in their hives. The existence of their young dspends on the liqnidity of the saccharine food presented to them, and if light were allowed access to this in all probability it would prove fatal to the inmates of the hive. *Working Farmer.*

Our Heavy Product.—The Los Angeles *Express* says: "It is stated that the honey product of San Diego county this year will be fully six hundred tons. One million two hundred thousand pounds of honey is prodigions for an industry only about three years old. Los Angeles county, also, is making tremendous advances in honey culture, and in a few years the two counties will supply the world. The honey of Southern California is without a rival in quality and flavor in the market. It is only during the last twenty years that bees were known in California, and to-day the business of apiarist promises to be one of the most important in the southern portion of the State."

Feeding Bees.—J. F. Montgomery, of Lincoln county, Tennessee, tells the readers of the Fayetteville *Observer* that every person owning bees, whether few or many, should now commence f—ding them with rye flour ground fine and unbolted. This is done by placing the flour in a shallow box or trough in the bee yard, where the sun can shine on it. A rag dipped into honey or sugar syrup should be laid on the flour, to attract the bees to it. On warm days will see the little fellows busily engaged rolling it up on their legs and carrying it into the hive to feed the young bees on. If rye cannot be obtained, unbolted wheat flour is a good substitute. If any one disbelieves the above statement, let him get the flour and try the experiment and he soon will be convieed of the fact.

Potato Blight in Marin County.—The loss by the potato blight has not been exaggerated. On many ranches the crop is a total failure, and on others it is less than half. John Griffin last year raised on 45 acres 3,000 sacks. This year he has 65 acres, and will be glad to get 1,500 sacks. Mr. Mulvaney has 30 acres and has turned his stock on them. D. Callan has 20 acres not worth digging. George Fleeman has 100 acres which he will not dig. J. P. Whittaker will get about 200 sacks from 25 acres. W. R. Fairbanks, George Dillon and M. Calliher, with some others, will get a good average crop. Those planted on low, moist ground seem to escape the blight and do well, while other fields that escape the blight are barren from drouth.—*Marin County Journal.*

The failures during the nine months of the present year in the United States foot up the enormous amount of $131,172,503. Extravagance has been the rule in the Eastern States for the last ten or twelve years. The country is now going back to first principles, and it will be well for all classes to reduce expenses as soon as possible.

Will some benevolently inclined friend donate us a newspaper published this Fall which does not allude to the fact that "the melancholy days have come."—*Bric-a-brac.*

Capital and Labor.

The Danger of Borrowing.

"The borrower is servant to the lender."—Holy Writ.

BY JNO. D. SCOTT, M. D.

To Agriculturist:—I have been informed that no one, no matter what his standing or wealth, can borrow a dollar from any of our banks. A gentleman in this city, with some fifty thousand dollars, was indebted to one of our money-lenders in the sum of a thousand dollars. The lender demanded his money—said he must have it—swore he could not do without it. The borrower tried hard to get a loan to that amount from our banks, and notwithstanding his offer of unexceptional security, he utterly failed to command the accommodation. Returning to old money-bags he informed that "pound of flesh" individual of the fact. Shylock then very coolly remarked, that in as much as the borrower could not pay his note, that he must give him a new one, at one and a half per cent. interest per month. As there was no other alternative he was forced to submit to the extortion. As there is no business in California, except it be highway robbery, that will warrant borrowing money at a greater interest than six or eight per cent. per annum, it will readily be seen how grievously this man has been wronged and robbed in the above transaction. It matters not whether a robber levels a legal or an iron blunderbuss at his defenceless neighbor's head. The effect is the same—the exaction of money by force. The wretched borrower might just as well fall in the highway as to suffer a lingering death in the spider-webs of the law.

It seems then that old Shylock could have done without his money after all. It was simply a dodge on his part to extort more interest. But he must have known beforehand that the banks would not loan under any circumstances, or he would not have resorted to the trick. Are the brokers and bankers in league to rob the public? Are they all in collusion to get up a corner in the money-market in order to raise interest up to the old and ruinous rates of one and a half and two per cent. per month? This simultaneous action looks very much like it or else we have a very striking coincidence!

Such conduct on the part of banks and bankers is highly reprehensible if not criminal. They are the reservoirs of capital as our mountain lakes might be supposed to be the reservoirs of water. The one would serve to furnish the life-giving element to our extended plains in times of drought, whilst the others should open their vaults and transfuse new life and rigor into the veins of trade in times of financial distress. It is in a dry season that farmers need water to perfect their crops. They want no irrigation when the heavens open and deluge their lands with floods. So in prosperous times merchants do not need so much bank accommodation. But when trade slackens and business becomes dull they need bank assistance to tide them over that period of dullness. But banks and bankers however pursued exactly the opposite course. When the money-market becomes tight, they tighten up their purse strings also. Their safe doors are slammed to, close as wrter-tight clam shells. This suicidal policy only serves to make money scarcer, to deepen distrust and to spread the panic wider. Perfectly responsible parties then go to the wall who never would have failed if there had never been a bank. In fact, this system of bank credit is an artificial and a stimulative one. It is like liquor, the more a man indulges in it, the more he wants, until at length he begins to think that he cannot exist without it. It is either drink or die, borrow or bust!

These institutions by thus affording ready facilities for borrowing money, do, most undoubtedly, stimulate the desire for adventure and foster the spirit of speculation. When they themselves, therefore, have helped to create a speculative tendency, how cruel, not to say criminal, to shut down the flood-gates at once and see a whole community perish without a single effort at relief. This State is dotted all over with these sad examples. It was in this way that nine-tenths of the native Californians have been dispoiled of their ranches and homes now worth many millions of dollars. It is in this way that many American farmers have been reaved from the trouble and responsibility of running their farms. The banks, or the friends of the banks run their farms for them. Two notable instances occur to my mind at this moment, one was an enterprising nurseryman and fruit raiser; he had a most valuable place of near an hundred acres, and of course his credit in bank was good. Alas! too good! for *now the bank is running the place for him.* The other was a hop-raiser and owned, perhaps, the best cultivated and most valuable hop-ranch in the State. His credit, too, became too good in the banks *and one of them has kindly relieved him of the labor of ever picking hops any more.* It soon made him hop higher than a Kansas grasshopper. And so these banks have served thousands of others. They loan their money and when a dry season comes and their crops fail, and they are utterly unable either to borrow or remortgage, then these financial vultures scoop down upon them and feed upon their heart's blood. But then the murder and robbery are all according to law! The law makes no allowance for the dispensations of Providence! The law has no mercy—no charity—and the pious capitalist who pays pew rent, religiously in a fashionable church, thinks he has a right to impoverish and beggar his neighbor if he has the legal power to do so. "It is so nominated in the bond."

Mr. Girard, the great banker and philanthropist of the centennial city, understood these matters better than the curbstone banker of to-day. He had it in his power during a well reimbursed financial crash to break up half the merchants in Philadelphia, and to add a quarter of the real estate to his exchequer. "There were millions in it," as a San Francisco banker would have exclaimed. His cashier approached him and informed him that all the other banks in the country had stopped making any loans, and asked him whether they should do the same. "No, sir," said Mr. Girard, *"when men need money that's the time they want it;* let *our* customers have all the money they want." The consequence was that he carried his friends triumphantly through the crises, whilst the customers of the other banks *and the banks themselves*, all went to the dogs. We fear that it would be difficult to teach our bankers anything like this—the idea may be too large to enter their diminutive calibres.

If our banks, after absorbing all the available and floating capital in the community, are, like the dog in the manger, indisposed to use it themselves, or to allow any body else to do so, except favored stockholders, the people have the proper remedy in their own hands. It is, *to deposit no more money with them and to withdraw what they have already deposited.* When an institution, like a bank, has ceased to perform the function, monetary relief, for which it was founded, it has outgrown its usefulness, and like any other nuisance, ought to be abated. We want blessings not curses in the community. Better have no reservoirs at all than those stagnant, miasmatic death-dealing cess-pools.

Which Shall Rule—Nine-Tenths or One-Tenth?—About one-half of our population belong to the farming class. About one-quarter of our population belong to the mechanical class. And about fifteen per cent. of our population are laborerers who make their living by their muscle. Has any one ever asked himself how much legislation is done by this ninety per cent. of our population? Is it not a patent fact that they have scarcely any influence in our National Legislation? The truth is, the legislation of the country is shaped and controlled by less than one tenth of the population. It is made in the interest of capital, instead of the interests of the people. And this is the reason there is so much suffering among the industrial classes to-day. There has never been such a concentration of capital going on as within the past few years, and a concentration of capital brings a concentration of political and law-making power. Capital has got the people within its toils. Can they release themselves? This is an important question. This must form a great political issue. If one-tenth of the people are to govern nine-tenths, and make them subservito their peculiar interests, it is time we were awakening to that fact. It can do no harm to bestow a little thought upon this matter.

An Eastern farmer would get rich on what a California farmer throws away. Nineteen-twentieths of the farmers of this State, not only hay all their vegetables, but also their meats, fruits, butter, cheese, flour and corn meal, and even a great many buy the very eggs they eat. Shittless! of course it is—but true, nevertheless. This is not all. Hired help are treated like Digger Indians; they sleep in the barn or haystack; have no accommodations or conveniences that a white man is entitled to; and the results are degrading and demoralizing to the laborer. The hired man at the East is treated as a gentleman; he has his tidy room, comfortable bed, clean sheets, and is surrounded by the refining influences of civilization. Here, in California, how different. Even the employers themselves, in many instances cannot boast anything refining about them or their premises; not even a flower or shrub to soften the dreariness of the spot they call home. California has not yet entirely risen from the chaos of its first social and political period. There is much work for the future on the golden shores of the placid Pacific. When our people begin to build homes, with all the attractions that surround Eastern homesteads, and resolve to live, instead of merely existeng then will the landscape blossom as the rose. —*Ex.*

Interest Too High.—It is estimated that the increase of wealth in the United States does not exceed three per cent. per annum. But men who have money to loan are not willing to take this increase, but charge at least ten per cent. In this way labor becomes bankrupt. Wealth finally gets away all the earnings of the industrial classes. It absorbs as the sponge absorbs water. A cheaper rate of interest is in same way demanded. Capital is absorbing the wealth of the people too rapidly.

In the States, as a whole, the number of acres is 32 to the hand employed; in Alabama, 17 acres; in Arkansas, 18 acres; in Georgia, 20 acres; in Illinois, 51 acres; in Indiana, 38 acres; in Mississippi, 21 acres; in Missouri, 35 acres; in Oregon, 85 acres; in Tennessee, 26 acres; in Texas, 18 acres; in California, 129 acres. To illustrate: California had in cultivation 6,218,133 acres, worked by 47,863 people. The Californian takes care of more than seven times as many acres as the Alabamain.

Household Reading.

Country Maidens.

BY GEORGE W. SEARS.

THEY sat with their small, white feet in the brook,
Two country maidens of beauty rare—
Kate, with her bright, ringlet look,
And blue-eyed Blanche, with her golden hair.

The air was fragrant with new-mown hay,
The wild bee wrought with a drowsy hum,
And they chatted the dreamy hours away,
With girlish plans for the years to come.

And she with the eyes of sparkling jet
Would be content as a farmer's wife,
To shun the follies that wear and fret
For the simple pleasures of country life.

Then Blanche with her eyes of sparkling blue
Shook down a river of sunny hair,
That rippled and flowed in golden hue
O'er bosom and neck and shoulders bare.

"And I," she said, "shall live in the town,
With lackeys to come and go at call;
And I shall be proud if men will me crown
Queen of beauty at rout or ball.

"My husband shall be a millionaire."
Oh, surely you guess your future life!
On you, with your beauty rich and rare,
Shall fall the lot of a farmer's wife.

And red-lipped Kate, with her midnight curls,
Shall win the riches for which you pine.
Her brow shall glisten with gems and pearls,
Her table with plate and costly wine.

But she shall long for the new-mown hay,
And the shadows upon the upland leas,
And sicken and tire of her splendid way,
And sigh for brooks and birds and trees

And you will sneer at your narrow lot,
Weary and tire of your household cares,
And each shall covet what each hath not,
And pine for the burden the other wears.

Oh, city dame and farmer's wife,
Each from the other too long estranged,
Ye were two jewels of love and life,
If but the settings were turned and changed.

Chats With Farmers' Wives and Daughters---No. 12.

BY "JEWELL."

Having had a little taste of farm life this past Summer, I feel more capable of offering advice or sympathy to the wives and daughters upon what might otherwise seem beyond my cognizance. But knowing how it is myself, and feeling that much unhappiness is caused by ignorant neglect, I think it a positive duty to mention a few of the unpleasant things about farm life to women.

First, the inconvenience of most of the farmhouses. Water in a well or tank some distance from the kitchen, where it all has to be carried for cooking, washing and other purposes; no sink to carry off the waste water, which in turn must be all carried out again: no boiler and water back to the stove to give a plentiful supply of warm water; no bathroom and few closets. In fact, a roof and a floor, with a few partitions, constitute the majority of our farmers' homes, where the wives and daughters spend the most of their lives.

Second, the drudgery of early rising, continued cooking and washing dishes, besides the accompanying washing and ironing, churning, with its heavy washings, scalding of pans, etc., making many a delicate woman an invalid by overworking when not equal to more than the actual cares of maternity.

Third, the extra amount of strength required to go to town, if the farm is any distance out in the country, takes from the enjoyment of the trip as a pleasure. Consequently the women-folks go only as a duty, when goods are to be purchased needing their selection; and with two or three children to take, and carry the whole distance makes the day indeed a hard one.

Then, usually, there are no horses on the farm a woman can drive to visit neighbors, so that pleasure is denied her unless the menfolks are going that way, and she is then at their disposal when to go or come. Indeed, she seems as much a chattel on the farm, useful and maybe ornamental, as any of the farm stock or high-priced farm implements belonging thereto. Certainly she is a necessity to do the drudgery and *woman's work*, and a companion to talk to when indoors, but as to making her labors light by giving a helping hand, or adding conveniences for work, or providing conveyances she or the girls can drive when or where they wish, how many farmers do it? That is just the question I wish to ask and have answered. I hope fifty in this valley may say in all truth they are thus favored, but I fear not more than five can honestly say it. The farmers say, "times are hard—can't afford it;" or, "crops have failed the past few years, and when it comes a good year I'm going to fix up things," etc. But, my good friends, don't you see your wives working under disadvantages, careworn and failing in health daily? your daughters losing their interest in the home that should be so dear to them, and longing for a home in town, or anywhere else but just where it is? Nothing seems pleasant where all is hard work with no freshness of improvement.

This is plain talk, but it is the truth in many a home; and I have seen enough of farm life to know that the men have many an idle day or week which might easily be improved by adding conveniences for the wife, or improving the flower-garden, or by giving a helping hand indoors, instead of spending it in town or visiting some neighbor *on business*. Let me whisper a word in the ear of fathers and sons: If you believe wives and daughters are blessings in farmers' homes, see to it that your farms are kept thrifty, your fences and gates firm and true, your cattle well-fed, fields well tilled and homes convenient and attractive, and my word for it, you will not complain of whole neighborhoods destitute of true and noble women to cheer and aid in your labours: and when you do have families you will be as much a blessing to them as you expect them to be to you. There is no modern convenience in city homes that might not have a counterpart in country homes, and no woman should be expected to do all the drudgery of inside farm work without such conveniences, at least, as will save steps and make as light as possible the necessary work of the family.

Grandfather's Letters---No. 3.

EVENTS OF THE LAST CENTURY,—A LOVE-LETTER AND MA'S AND SUSIE'S REMARKS THEREON.

On breaking open an envelope the other morning, Angie exclaimed: "Why, ma! I declare, here's a love-letter! I know it is one from its length. I wonder who that can be from." "Oh," replies ma, "it must be from one of your old beaux, or perhaps, and better, from one of your late conquests. Well, do read and let's see what it is." "I guess you may be right, ma: for it has such a long address—begins, 'My darling, precious, beloved Angie!'" "Why, that's good; go on," says ma. "'I think of you, talk of you, write of you, and I love you.'" "Better yet, if he only proves worthy of you. Beware of giving him the mitten." "I wonder he does not say he dreams of me." "Oh, that is only the sleeping thinkings; you may be sure he does that. Well, go on."

"'I have in these few words stated my position towards you. These are the heart's impulses; there are those of the head to be thought of by-and-by. First, those of the heart: You know there is such a thing as attraction and repulsion; every one must have experienced this—how readily the best feelings of our nature flow out towards some, while from others we are repulsed, when but little, if anything, has passed between either. I mark this as a fact, without pretending altogether to account for the cause. Suffice it to say, you have proved for a long time attractive to me; hence, my language at the commencement of this letter, and its result in the whole letter itself. If is but fair and just to yourself, dear Angie, to account for this attraction, so far as I am able, and I wonder others have not seen the darling Angie as I have seen her.'" "Can't forget the endearing epithets, can he," says ma. "'I have observed that polite courteousness of manner and kindliness of demeanor towards all, under the varying circumstances and phases of life, and I know it to be inherent in your very nature.

"'I have observed too, your attentive deference to your dear ma's slightest wishes, your counseling her on slight as well as more important occasions, your readiness to lend a helping-hand to your brother out doors, to ornament the parlor or assist in the kitchen, and surround the porch with Nature's loveliest beauties, and besides all this an abnegation of self in favor of those around you.

"'Can you wonder, beloved Angie, my mind dwelling on all this till you have become precious to my memory, at my addressing you in the language of this letter?'" "Why, who can it be?" again exclaims ma. "We'll soon see," says Angie, "for I am near the end of the letter. It goes on, 'I fancy you want to know, by this time, who it is that thus addresses you, and what's the meaning of all this? To the first question I answer, you must guess. You have so many visitors to whom the same things are open and palpable as to myself, that I feel you are about as likely to guess wrong as right. If you have been a very close observer the chances may be in favor of your guessing right. The reason for the *nom de plume* will be explained hereafter, if occasion require. As to the other question, dear Angie, you will do me the favor to let me know if I may cherish those sentiments with which I began this epistle, or if I must quash them. Rely on their genuineness and sincerity; but of your condition and circumstances I am too ignorant to know if they can go beyond mere sentiment, so anxiously await your reply to

INGLEWOOD.'"

It's all right to talk about bringing up a child in the way he should go, but the other day, when a Third-street woman set out to do it, a man halted at the gate and shouted, "Go in, mother—cripple the boy for life!" and a woman leaned over the fence and screamed, "Why don't you cut his throat?" and a boy climbed on the alley fence and cried out, "Why in blazes a'nt the reporters around here to get this a-w-f-u-l tragedy?" And the mother had to stop pounding and go into the house.—*Detroit Free P*

Domestic.

Our Own.

I had known in the morning,
How wearily all the day,
The words unkind
Would trouble my mind
I said when you went away.
I had been more careful, darling,
Nor given you needless pain;
But "we vex our own"
With look and tone
We might never turn back again,

For though in the quiet evening
You may give me a kiss of peace,
Yet it might be
That never for me
The pain of the heart should never cease.
How many go forth in the morning
That never come home at night;
And hearts have broken
For harsh words spoken.
We have careful thoughts for the stranger,
And smiles for the sometime guest,
But oft for our own
The bitter tone.
Though we love "our own" the best.
Ah! lips with the curve impatient,
Ah! brow with that look of scorn;
'Twere a cruel fate
Were the night too late
To undo the work of morn.

Familiar Talks---No. 4.

BY SNIP.

FRIED CAULIFLOWER

Is a favorite dish with us, but seems to be unknown to all who have not eaten it here or hear it spoken of. It is a breakfast dish with us, and is prepared in this manner: The cauliflower is boiled and mashed, as you would mash potatoes, in the evening, and mixed with pepper and salt, and if you like, a little butter. In the morning make a batter, not very thin, of flour and milk and one egg, for two small heads of cauliflower. Fry in small cakes—about two tablespoonfuls for a cake—and be careful it does not burn.

I here give some of my favorite recipes. The first has no name, so you may call it what you like:

Take some mashed potatoes, or boil and mash some. If the latter, mix in some butter or cream, or if you have it, some good meat gravy. Season to suit your taste and put a layer in a deep dish; upon this place a layer of finely minced meat, seasoned to suit. Alternate in this way until the dish is filled. Then spread the top thick with bread-crumbs and bake until quite brown.

BOILED BREAD PUDDING.

Crumb your stale bread in a pail that has a tight-fitting cover. Cover the bread with sweet milk and put it by the stove to warm and soften. Then to every quart of the mixture add two well-beaten eggs, a cup of sugar, a handful of raisins or sweet dried fruit of any kind. Do not have the pail full, as it will rise some. Set it in a kettle of boiling water, having the cover on tightly, and boil about an hour. It is superior to baked bread pudding.

UNCLE SNOOP'S COOKIES.

One cup of sugar, one-half cup of butter or lard, one teaspoonful of soda, two teaspoonfuls of cream-tartar, two-thirds of a cup of water. The thinner they are rolled the better. If made of lard they will need to be made thin.

CREAM CAKE.

One cup of sour cream, one cup of sugar, two cups of flour, two eggs, one teaspoonful of soda.

BREAKFAST CAKE.

Four cups of flour. two cups of milk, one half cup of sugar or not as you choose, two eggs, one teaspoon of soda, two teaspoons of cream-tartar. This will make two cakes it baked in tin biscuit pans.

Carving at Table.

BY AUNT MARTHA.

One of the most important acquisitions in the routine of daily life is the ability to carve well, and not only well, but elegantly. Not only at the tables of the aristocratic, but in the circles of middle life, where not all the refinements of cookery are adopted, the utility of a skill in the use of a carving-knife is sufficiently obvious.

In the first place, whatever is to be carved should be set in a dish sufficiently large for turning it if necessary; but the dish itself should not be removed from its position, which should be so close before the carver as to only leave room for the plates. The carving-knife should be light, sharp, well-tempered and of moderate size, strength being less required than skill in the manner of using it.

Large, solid joints, such as ham, fillet of veal and salt beef, should be served in thin slices, while lamb and the like should never be cut in very slender slices.

The art of carving is not attained by the study of books and plates, any more than that of the carpenter or house-builder by the study of architecture; and while these are useful in their place, the art is only made perfect by a regular apprenticeship; and every young man should put himself to this work in early life. It is a very cause of admiration to find such proficients in doing the honors of the table. There are too many, both among the young and the middle-aged, who exhibit the most embarassing awkwardness when called upon to officiate in this capacity at home or abroad.

How to Prepare Feathers for Use.—Before the time comes for killing poultry for market, it is a good plan to prepare two or three bags of coarse, unbleached cloth—one to contain the geese and ducks' feathers, and the other for chickens' and turkeys' feathers. When plucking the poultry, cut off the wings first, and if not needed for dusters, strip off the feathers from the parts nearest the body and then peel off the feathery parts from the quill, but take care that no skin or flesh adheres to any of the feathers. Then put the bags into a brick oven, if you are the fortunate possessor of one, and keep them there, except when the oven is used for baking purposes, taking them out into the wind occasionally and beating them with a stick. When you have collected enough to fill a pillow, cut the shape you desire out of bed-ticking and stitch it round on the wrong side with coarse, well-waxed thread, leaving a small space at one end to put in the feathers. Now lay it on a table, and rub it over on the wrong side with a piece of beeswax, just warmed a little, so as to besmear the ticking. If you cannot obtain the beeswax, common yellow soap will do as well. If you do not wish to use the feathers, either for pillows or sofa-cushions, they can be put into beds that have become a little empty. The geese and duck feathers make the best beds, but the mixed feathers do well for cushions, etc. If any of the skin or flesh adheres to the feathers, they will have a disagreeable, putrid odor, which may seem to be an insurmountable obstacle to their use; but if, after the family wash is finished, the bag, tied up closely at the neck, is put into the boiler of soapsuds and boiled a few moments, moving it about with the clothestick and lifting it up and down and squeezing it out a few times, and is then taken out and hung in the air for several days, and shaken hard, when the feathers become dry they will be light and free from any bad smell, and they can then be put in the oven, and thus kept free from moths and always be ready for use.

Corned Beef.—For every one hundred pounds of beef, after the largest bones have been removed, apply the following: Four pounds of table salt, four pounds of white sugar, two ounces of salt-petre, and two ounces of baking soda. Mix all together and rub every piece of meat thoroughly, and then pack close and firm. In a few days there will be brine enough to cover the meat. The animal heat should be all driven off before packing, and this is really one of the most important conditions to be observed before salting. If beef is killed in warm weather it should be placed in an ice house for forty-eight hours before salting. But the best time to put it down is in late Autumn or Winter, when the weather is cool.

Apple Puffs.—Mix a quarter of a pound of butter with a quart of sifted flour, two eggs, a spoonful of salt and a half-teaspoonful of soda, dissolved in a little cold water. Moisten it with cold water so you can just roll it out easily. Roll as thin as possible and cut into cakes. Put three of them together, sprinkle flour between each one, lay on the top thin slices of tart apples and sprinkle sugar and a little nutmeg over them. Enclose the apple by doubling the pastry over them, pressing the edges well together, and fry in sufficient hot lard to cover them. When of a light brown, take up carefully.

Stewed Fowl.—Fill the inside of a young fowl with oysters, put it into a jar or tin pail tightly closed, and put it into a kettle of water. Boil an hour and a half. There will be a quantity of gravy from the fowl and oysters. Add to it a little flour made smooth in a small quantity of water, some butter, seasoning to taste, and more oysters with their liquor. Serve this with the fowl, which will be very white and tender. All the fine flavor lost in ordinary boiling will be preserved.

How to Preserve Smoked Meats.—Take ground black pepper, the finer the better. Wash all the mold or soil off from the hams or beef, and while they are damp rub them thoroughly with the pepper. Two pounds of pepper will keep thirty pounds of meat free from flies and insects of all kinds. It can remain, after being thus treated, in the smoke-house or wood-house and not a fly will approach it. It also improves the flavor of the meat.

Polishing Shells.—Mrs. Bryan, in the *Western Farm Journal*, says: "My way of cleaning and polishing clam shells is to boil them in very strong lye about half an hour, then scrape them with a knife until I get all the outside crust off. I cleaned some the other day that looked just like pearl. When done they look almost as pretty as sea shells. For the periwinkle, mollusk, etc., I just rub them with a coarse cloth after they have been boiled in the lye. Care must be taken not to boil them too long."

Pocket Mucilage.—Boil one pound of the best white glue and strain very clear; boil also four ounces of isinglass and mix the two together. Place them on a water-bath with half a pound of white sugar, and evaporate till the liquid is quite thick, when it is to be poured into moulds, cut and dried to carry in the pocket. This mucilage immediately dissolves in water, and fastens paper very firmly.

To Take Grease from Wall-paper.—Lay several folds of blotting-paper on the spot, and hold a hot iron near it till the grease is absorbed.

Washing to Stiffen Fine Lace.—Dissolve a lump of white sugar in a wine-glassful of cold water.

☞ *A Choice Specimen* of some elegant plant or flower is often seen in the show-window of Jackson Lewis' Jewelry store, Anzeraais House Block. They are taken from his own private garden and conservatory near the Santa Clara Street Schoolhouse, San Jose. We take a stroll through his grounds occasionally, and know of no place so beautifully snpplied with rare and wonderful plants. Mr. Lewis spends his leisnre hours among his pets, which he knows by name and cultivates understandingly. Any person who wishes to note what plants are suitable for any particular locality, would do well to visit Mr. Lewis's garden, which is worthy of being named the Botanical Garden of San Jose.

☞ Mr, Mitchell, the Seedsman and Florist of San Jose, will display a splendid array of beautiful plants, and ornamental grass and other boquets for Christmas gifts and decorations. His selection of brackets, flower-stands, hanging-baskets, &c., &c., is superb, and such things make acceptable gifts for Christmas, or any other day in the year. His stand is near the Mercury office, opposite the Farmers' Union, on Second street.

☞ *Wilcox* is a man of his word, and his Boots and Shoes are just what he says they are. You can depend upon fair dealing at his store. His neighbors, Smith & Ryder, Jewelers, are also, fair, square, and gentlemanly dealers, we vouch.

☞ The National Gold Medal was awarded to Bradley & Bulofson for the best Photographs in the United States, and the Vienna medal for the best in the world.
429 Montgomery street, San Francisco.

☞ For a fine Christmas present a Chickering piano or Estey organ is just the thing. Smith & Ryder, agents, Wilcox block.

☞ Fine optical goods at Smith & Ryder's for the grandpa and grandma, and other people.

THE number of hogs in Illinois is reported to be over half a million less than last year. At present there is a prospect that the number will be reduced this fall to much below the average. Hog cholera will carry off a good many, and high prices will cause the death of a much larger number. Between the ravages of disease and the ravages of the butcher-knife, it is feared that there will not be enough left for breeding purposes. For the matter of that, there were not enough kept from last year, and the present scarcity is the result.

NEVER, on any consideration, says the Wisconsin *Horticultural Report*, put imperfect or small fruit with larger or better, as it reduces the whole package to the grade of the poorest in it. The strength of a chain is not that of the stoutest, but of the weakest link, and so the worst specimens in a package will drag all the rest down to their level, and you with it in the final reckoning.

Hardeware !

HENRY B. ALVORD,

326 First Street,

SAN JOSE.

Just received a New Stock of

PLOWS, CULTIVATORS, HARROWS, ETC., ETC.

Have as usual a full assortment of

MECHANICS' TOOLS,

AND BUILDERS' HARDWARE,

.. ALSO ...

IRON, STEEL, COAL, ETC., ETC.

GREAT PUBLIC SALE

OF IMPORTED

CLYDESDALE STALLIONS,

TO BE HELD IN THE

CITY OF BLOOMINGTON, ILLINOIS,

ON

Wednesday, January 19th, 1876.

The subscriber will sell, at the time and place above-mentioned, 14 first-class horses imported from Scotland last August, and pronounced by competent judges to be the finest lot of horses ever imported into the United States, consisting of two two-year olds, four three-year olds, weighing from 1500 to 1700 lbs., three four-year olds, weighing from 1800 to 2100 lbs., four five-year olds, weighing from 1800 to 2000 lbs., one six-year old. The sale will include one English Draft-horse and two first-class half-bloods, weighing over 1700 pounds. Part of them have been shown at the Western Fairs of 1875, and have been very successful in the prize ring, although competing against a large number of imported horses. Amongst the lot are the seven-year-prize horse at the McLean County Fair held at Bloomington, twenty-five horses competing; also second prize at St. Louis Fair, sixteen horses competing; first prize in three-year old ring, eight horses competing; besides many other prizes this Fall too numerous to mention.

This is the largest and finest lot of horses ever offered at public sale in the West, and are well worth the attention of horsemen.

SALE WILL BE POSITIVE, to commence at one o'clock sharp.

Terms, one-half cash. A credit of 15 months will be given for the balance, with approved note at 10 per cent. interest, 6 per cent. off for full payment. Catalogue and pedigrees on application.

The horses can be seen any time before the sale at

T. C. DUNCANS,
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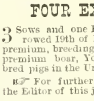

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VOL. 7 — EUREKA — CALIFORNIA — NO. 2

CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL

A HOUSEHOLD MAGAZINE.

A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

FEBRUARY.

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A DOMESTIC JAR

—AND—

HOUSEHOLD TUMULT.

Our readers will notice that the Household and Domestic departments look rather mixed on page 23 of this number. In putting the type into the page forms, the columns were set up wrong side to—that is, the column that should have been on the left of the page is set on the right of it. To make everything come right, commence reading the 23d page at the top of the right hand column, and follow the columns from right to left, exactly the same as the Chinese read their papers. This CHINESE PUZZLE is the result of accident, not design, on the part of the compositor.

As our Puzzle department is lacking this month, this practical one of the types may be regarded as equivalent to a remonstrance.

A. M. FELDMAN.

A LARGE TRADE

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Light Rents and Running Expenses will allow SMALL PROFITS.

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A. M. FELDMAN.

P. S.—Please mention where you saw this advertisement. fe

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THOMAS G. NEWMAN,
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Nurseries.

WE, THE UNDERSIGNED, HAVE BEEN engaged in the Nursery Business for the last ten years in San Jose, and our chief aim has been to grow and produce only the very best varieties of Fruit Trees, and those of a healthy growth, and such trees as will give satisfaction to our patrons. In order that purchasers may know our varieties, and also our prices at wholesale or small lots, we give the following:

ONE YEAR OLD TREES.	Per 100.	Per 1000.	TWO YEAR OLD TREES.	Per 100.	Per 1000.
Apple	$12	$100.		$20	$150
Pear	20	180		28	250
Prune	22	200		30	—
Plum	20	180		28	250
Cherry	22	180		30	260
Peach	12	180		—	—
Nectarine	25	—		—	—
Quince	20	—		—	—
Almond	20	—		—	—
Apricot	25	200		—	—
Fig	—	—		20	—
Currants	5	—		—	—

We also offer a large assortment of the leading kinds of Ornamental and Evergreen Trees. Purchasers who wish choice grown trees are invited to visit our Nurseries and examine our stock, as we know their character and healthy growth will please them. Persons unknown to us, that order trees, should send the cash or good reference, in order to secure their trees.

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Parties desiring to purchase Live Stock will find in this Directory the names of some of the most reliable Breeders.

OUR RATES.—Cards of two lines or less will be inserted in this Directory at the rate of $ cents per month, payable annually.

A line will average about seven words. Count five words for the first line.

CATTLE.

S. B. EMERSON, Mountain View, San Clara County, Cal.—Breeder of Short-Horn and Holstein Cattle and Cotswold Sheep.

CYRUS JONES & CO., San Jose, Santa Clara County, Cal.—Breeders of Short-Horn Cattle. "Young Bulls for sale."

CHARLES CLARK, Milpitas, Santa Clara County, Cal.—Breeder of Short-Horn Cattle and Swine.

COLEMAN YOUNGER, San Jose, Santa Clara County, Cal.—Breeder of Short-Horn Cattle.

C. R. POLHEMUS, San Jose, Santa Clara County, Cal.—Breeder of Short-Horn Cattle.

CARR & CHAPMAN, Gabilan, Monterey County, Cal.—Breeders of Trotting Horses, Short-Horn Cattle and Swine.

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LENDRUM & ROGERS, Watsonville, Cal.—Importers and breeders of the finest Cotswold Sheep and Angora Goats.

MCCRACKEN & LEWIS, San Jose, Cal.—Importers and breeders of fine Angora Goats also, fine Cotswold graded bucks for sale.

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LENDRUM & ROGERS, Watsonville, Cal.—Importers and breeders of Pure Angora Goats.

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WALLACE & COCHRAN, 386 First street—Handsome turnouts always on hand at fair prices. Fine Hearse for Funerals. Carriages for sale. Give us a trial.

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OFFICE OVER T. W. SPRING'S STORE, opposite the Post Office, San Jose.

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429 Montgomery street, San Francisco.

The California Agriculturist
AND
LIVE STOCK JOURNAL.

Vol. 7--No. 2. | SAN JOSE, CAL., FEBRUARY, 1876. | Subscription Price, $1.50 a Year. Single Copies, 15 Cents.

A Valentine.

Oh, little loveliest lady mine,
What shall I send for your valentine?
Summer and flowers are far away;
Gloomy old Winter is king to-day.
Buds will not blow and sun will not shine;
What shall I do for a valentine?

Prithee, St. Valentine, tell me here,
Why do you come at this time o' year?
Plenty of days when lilies are white;
Plenty of days when sunbeams are bright.
But now, when everything's dark and drear,
Why do you come, St. Valentine dear?

I've searched the garden through and through,
For a bud to tell of my love so true;
But buds were asleep and blossoms were dead,
And the falling snow came down on my head.
So, little loveliest lady mine,
Here is my heart for your valentine!

—St. Nicholas.

RALPH'S VALENTINE.

A Story as Aunt Abby Told It.

BY NELL VAN.

One rainy February day Dr. Pemberton's children, with their cousin George, were all gathered around the dining-room table preparing valentines for the approaching festivity of St. Valentine. No one could excel Cousin George, so the young folks thought, in the making of comic valentines. He had the faculty of producing burlesque likenesses of any one he knew, with bodies of birds or or beasts arranged in the most killing positions, and causing the most intense satisfaction among the young folks, while Bertha selected suitable verses from a book of promiscuous poems. The sedate Arthur was arranging sentimental valentines of gilt and perforated paper, profusely ornamented with decalcomanie birds and flowers and tinted tissue paper trimming. They were having a most delightful time, when, as is often the case, an altercation arose between the younger ones because George could not draw fast enough for Susy and Jane to color, and Tom declared it was his turn to have the next to paint, and so on, when Aunt Abby stepped in to quell the tumult.

She was a kind, motherly soul, without kith or kin in the world, but known everywhere as Aunt Abby. Whenever there was a murmur of discontent among the children, Aunt Abby invariably appeared upon the scene and took her station by the fireside with her everlasting knitting-work, and before she was aware of it she would be telling a story of bygone days to the listening crowd.

"Flutter, flutter! what's the buzz now little folks?" said she, cheerily, as she entered the room just as Arthur was trying to pacify the youngsters. "What's going on here, with all these pieters and papers? Makin' valentines, do ye say? Well, well, when I was young"—

"Yes, that's right, Aunt Abby," said Susy, brightening up, for well she knew those to be the words used to preface a story.

"Yes, a story!" cried another of the group.

"We'll be good if you'll tell us one," said little Jane, quite penitently. Aunt Abby replied:

"Well, I was jest sayin', when I was young we never had nothin' of that sort for valentines. Real flesh and blood valentines were none too good for us in them days. On the mornin' of the fourteenth of February up we would jump and peep out the window, for the first lad we clapped eyes upon was to be our valentine for the year; and though we felt a little shy about naming it, yet somehow or other 'twas sure to come out, and there was no end to the fun we had at the spellin' match, quiltin' bee, or any of the frolics where we young folks were sure to meet."

"And was it the same rule for the boys, Aunt Abby?" adding "for in these days a fellow might watch out for half a day and never see a girl go past"

"Lor' bless you, no, child," said Aunt Abby. "The lads had much the best chance to choose their valentines. They used to go about the town, peeping up at the chamber windows of the gals they knew, or into open doors, a'most sure to see somebody they was lookin' for; and it was droll to see how gallant they'd be to the gal of their choice, or ill-mannered and rude if the wrong one appeared first."

"How well I mind the year that Master Ralph, then a lad of fourteen, passed the Winter at his Cousin Susan's house in Amherst. He had been left an orphan when a little boy, but was a prime favorite among his folks. He was always a studious lad, and so old-fashioned in his talk and ways that it was curious to watch and listen to him. There was quite a tumult in the house on Valentine's day mornin' that year, owin' to the arrival, durin' the night, of a first baby to Miss Susan, as I always called her. You see, when but a slip of a gal, I had gone to live at Miss Susan's mother's house, and after Miss Susan got married to a Colton, who was second cousin to my brother's wife's uncle, I became Aunt Abby to the hull tribe. About this time Brother Tom was took with the janders and died, leavin' me alone in the world, for his wife, Polly Ann, died of grief afore the year was out; so you see nothin' was left for me but to go out nursin'. I did amazin' well, and brought three families safely through the measles and mumps, and no end to the cases of chicken-pox and canker rash I was called in to tend. Well, I was with Miss Susan (Mrs. Colton, I should say) with this first baby, and as I was going down to breakfast that first mornin', who should I meet on the stairs but Ralph. He had heard the news, and seemed proper glad, and mighty anxious to take a peep at the little stranger.

"'Mayn't I see Cousin Susan and the baby, Aunt Abby?' says he to me.

"'Well, yes,' says I, 'certingly; you can walk right in and I'll show you the purty creatur.'

"How softly he stepped in! and after sayin' good mornin' to his Cousin Susan, he watched me pick up the little mite of a baby from its mother's side and lay it across my knee in front of the fire.

"'Oh,' said he, 'what tiny fingers and finger-nails, too!' Then comparing the length of the little hand with his own brown one, he said, 'Do you think mine were ever so small as these?'

"Then I uncovered the feet, and such a time as he made over the funny little toes, and he measured the length of its foot with his fingers, sayin', in his quaint fashion, 'Well, there will be a wife for somebody, eh, Aunt Abby?'

"'Who's your valentine to-day, Ralph?' asked his cousin, from the bed.

"'Why,' said the lad, 'I had not thought of that. This young lady here is the first one I've seen to-day. She must be my valentine this year, and I'll take a kiss to seal the compact;' so, pressing his lips to the soft baby cheek, he said, 'You'll be my valentine, eh, baby? silence gives consent, you see,' and with a murmur of applause from baby's mamma, Ralph kissed his hand to her, said 'bye-bye' to baby and was gone.

"Well, as the years passed on I was at Mrs. Colton's off and on, till that pretty baby had grown into a blooming lass, with dark, curling hair and eyes like night. They named her Clarindy, and she was right smart with the six younger brothers and sisters, who gave their mother a sight of trouble. The year that Clarindy was sixteen, the measles broke out among the children, followed by the whoopin'-cough, and nothin' would do but that Aunt Abby must be sent for to carry them through. Besides, Clarindy had a beau, and folks said she was to be married in the Spring. True, he was a most double her age, bein' close on to thirty, and a medical man, having gone through his studies, graduated and traveled some, but come to Amherst to settle into practice. I never mistrusted who the Doctor, as they called him, was, till one day I chanced to open the door for him, and there stood before me, as nat'ral as life, Master Ralph! only the bits of whisker half-way down his cheeks made him appear more manly looking. His eyes hit up when he see me and he said:

"'Why Aunt Abby, are you here? Do you remember me?'

"'Indeed I do, Master Ralph,' says I, with clear wonderment.

"'Is Clara in?' he asked; and says I to him, 'Well, yes; she's fixin' to go ridin' with'——

"Before I could say more one of the young ones came out, and seeing who it was, sung out, 'The doctor's come! The doctor's come! Now mayn't I ask him to let me go too?'

"And this, then, was Clarindy's lover; the same boy, Ralph, grown into a han'som' doctor, a goin' to claim for his wife the valentine of his boyhood! Oh, children, truth is stranger than fiction every time."

"Tell us more," said little Jane.

"What became of them?" asked sedate Bertha.

"Do tell us more, dear Aunt Abby," said Susie, with enthusiasm.

"Well, children," slowly resumed Aunt Abby, "the last time I see any of the doctor's family was one rainy day in February, when I stepped in to quiet the children, who were skirmishin' over the makin' of valentines."

"Just like me," said little Jane.

"So," continued the old lady, "I dropped into a chair with my knittin' work and set out to tell them of bygone days and the true story of Dr. Ralph Pemberton's valentine."

"Oh, that's a good one," said George. "I knew all along it was Uncle Ralph and Aunt Clara you were telling about."

"Was it Papa and Mamma, really, truly, Aunt Abby?" asked little Jane, while Bertha and Sue uttered little exclamations of surprise.

"Of course it's true, simpleton," spoke Arthur. "Don't you know Mamma's birthday is on St. Valentine's day, and her name is Clara while Pa's is Ralph?"

"Why no," said the persistent little Jane; "Papa is only Pa and Doctor, and Mamma is—well, Papa calls her Deary and we call her Mamma, you know."

FAVORABLE NOTICES.

We are under obligations to the local press generally over the State for many flattering notices of our new volume. We make room for but one this month, and give that because it comes wholly unexpected from one of our home papers. We value the notice all the more highly for, as a general rule, there is a sort of jealousy existing between papers published in the same town, which prevents the expression of a good will. But the *Patriot*, under its present management, is able to be independent of and above petty meaness, and is conducted in a manner to gain the respect and confidence of its readers.

"The California Agriculturist.—The first number of the seventh volume of this magnificent periodical is before us, and we are proud of it. The California Agriculturist and Live Stock Journal, to use its proper title, is a publication which reflects honor on the taste, intellect and progressive spirit of San Jose. It is a magazine, no more of the special interests indicated by its name, than a journal of general art, knowledge, literature and fine miscellany. Thus, in the splendid number on our table we find, besides a variety of able editorials, whole departments well filled with essays on many important subjects, such as gardening, hygiene, stock rasing, education, pisciculture, etc. A history of the State Normal School (with illustrations) will be found, together with a week's reading of the most interesting matter for old and young, for the farmer, artisan, scholar, housekeeper; in fact it is a magazine for everybody, and better worth the subscription price—$1.50—than any similar work in the country. Office over the San Jose Savings Bank.—*San Jose Patriot, Jan.* 18.

Stone jars which have become offensive and unfit for use, may be rendered perfectly sweet by packing them full of earth and letting them stand two or three weeks.

California Agriculturist
AND
Live Stock Journal.
$1.50 Per Annum.

PUBLISHED MONTHLY BY THE
CAL. AGRICULTURIST PUB. CO.
S. HARRIS HERRING, Editor.

OFFICE:—Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

SPECIAL TERMS TO AGENTS.

RATES OF ADVERTISING:

Per one Column	$12 00 Per Month
" half Column	6 00 " "
" fourth Column	3 00 " "
" eighth Column	2 00 " "
" sixteenth Column	1 00 " "

☞ We are determined to adhere to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

Back Numbers.—With the exception of the August number, we have several complete files of the AGRICULTURIST for 1875 to spare. Subscribers who lack copies to complete their files should send orders in at once, and as long as we have any to spare we will forward them to you by mail, free of expense.

Sumac Seed.—Mr. Jacob Eberhardt, of the Santa Clara Tannery, has left at our office for distribution a sack of sumac seed. Such of our subscribers as would like to experiment with the cultivation of the plant can have a package sent to their address by ordering the same. The sumac is a tree well known east of the Rocky mountains, and is valuable chiefly for its tanning properties.

Thanks to the few subscribers who have responded promptly to the statements of accounts lately sent out. Angels' visits are said to be few and far between. Perhaps for this reason they are all the better appreciated. But when it comes to paying our bills, we sometimes are compelled to think we could appreciate a more profuse shower of postal money orders, etc. But then, we may be happy yet.

Senator Lane is doing a good work for retrenching the enormous fees and salaries of officials. The people are taxed beyond endurance to feed a lot of cormorants who do more harm than good anyway, and the more pay they get the worse they are, on general principles. Economy and patriotism should crush out these parasites and pay for honest service only, and only pay wages in proportion to the earnings of useful, industrial pursuits. Every cent of pay above that is a premium offered for corruption and extravagance.

The boys and girls did not send their little letters soon enough to get them into their department this month, but they will find more than a page of choice original articles by their favorite friends. Aunt Polly's puzzle has been solved by several who will get a hearing next month. By the way, she is preparing a nice budget for March, and wants you to write to her early. Do not forget, now, but write at once.

A petition to the city to make the San Jose Library free to the public, and to pay $100 per month for its support, is being circulated and generally signed by the citizens. We believe it will be a good thing, for many persons and families who would like to read the books cannot really afford the 50 cents per month now charged for membership. The tax to pay the expenses will not be burdensome to any one, and will be devoted to a noble purpose. The library will be likely to attract many who might otherwise seek demoralizing associations, and must result in much good to every class of the community.

Laying Out the Garden.—Since we wrote the article which can be found under the Vegetable Garden department about laying out, planting and cultivating the garden, we find, in *Coleman's Rural World*, similar advice to its readers by its practical editor, who closes his remarks by saying: "If the readers of the *Rural World* will adopt this system in cultivating their gardens, they will say at the close of the year that the suggestion was worth much more than the subscription price for the year." This is even so, and the readers of this journal may as well take the matter close home in our case.

Pluck will win against odds. Two years ago Mr. Bennett started a furniture factory in San Jose, and several furnitrure dealers tried to beat him out by running down prices and discouraging him in every way. But, although he had little capital, he bent all his energies to his work. He thoroughly understood his business, and attended to it, turned out most superior and elegant work, and commanded patronage and success. He has lately enlarged his manufactory, in new quarters on St. John street, employs some twenty men, and the best of machinery run by steam power. Mr. B. has experienced difficulty in getting good, steady, honest boys to work and learn the trade. The right kind of a boy can find an opportunity, with Mr. Bennett, to learn a good trade. None other need apply.

☞ Business and professional men have long felt the want of an encyclopedia that is at once concise, complete and authoritative, compiled from other books only so far as relates to past events and positive knowledge, and written up by the best living representatives of the various departments of science, art and technical practice, and occupying a small space, so that it can be consulted without overhauling a dozen books to get at a single fact. Such a want seems to have been recognized when Johnson's Cyclopedia was designed. An examination of the first book of the four volumes convinces us that it comes nearer filling the bill than any other work ever published.

The new outside dress of the AGRICULTURIST was designed and engraved by women—Leila Curtis & Co., 606 Montgomery street, San Francisco. The work will speak for itself, and any words of praise from us would be superfluous.

Horticulture.

PLANT TREES.

OUR nurserymen are all doing a good business this season. This shows that the people are planting lots of trees, and we are glad to note the fact. The abundant and long continued rains have put the soil into readiness, so far as Nature can do it. The advice we gave in December and January numbers is applicable now as then. *Plant trees now* if you ever intend to. Plant a good orchard for home use, fence it in against all stock but poultry, and never allow animals to run in it at all. On the windward side plant two or three rows of evergreen trees for a shelter and breakwind. Monterey cypress and pepper trees are *best*, and should be planted not over eight feet apart. Gum trees (Eucalyptus) grow too tall to do much good alone as a shelter, but together with trees of a lower growth are very good.

UNITED STATES ORANGERIES.—In years gone by we have received our chief supply of oranges from Cuba, Spain and Sicily. We now, however, enjoy this delicious fruit all the more because it is grown on our own soil and under our own flag. It has been demonstrated that the United States grows oranges which equal any that are produced in the world. Indeed, some good judges think the Florida orange the best that is grown anywhere. In California the orange is grown to great perfection, and the crop is increasing every year. During this year, also, it has been satisfactorily proved that excellent oranges will grow in Berrin county, Georgia. The Valdosta *Times* is authority for stating that orange culture is well established in other sections of South Georgia. The trees are now in the third year of bearing, and they are in no way inferior to the much admired Florida orange. The same result may be expected in other sections of that State, and in still other Southern States where the experiment has not yet been tried. A greater number of orange groves are being planted in Orange county, Elorida, this year, than ever before during the same length of time, and the same is no doubt true of other counties in the same State. Everywhere, throughout the State of Florida, they are making increased preparations to send larger quantities of this delicious and healthpromoting fruit to the markets of our northern cities.—*Ex.*

LIQUID GRAFTING WAX.—The *Horticulturist* gives the following formula for making Lefort's liquid grafting wax, which is said to have been highly commended in France and until lately kept secret: Melt one pound of common resin over a gentle fire. Add to it an ounce of beet tallow and stir it well. Take it from the fire, let it cool down a little, and then mix with a tablespoonful of spirits of turpentine, and after that about seven ounces of very strong alcohol (sixty-five per cent.), to be had at any drug store. The alcohol cools it down so rapidly that it will be necessary to put it again on the fire, stirring it constantly. Still, the utmost care must be taken to prevent the alcohol from getting inflamed. To avoid this, the best way is to remove the vessel from the fire when the lump that may have been formed commences melting. This must be continued till the whole is a homogeneous mass, similar to honey. After a few days' exposure to the atmosphere in a thin coat, it assumes a whitish color and becomesas hard as stone, being impervious to water or air.

THE SPANISH CHESTNUT.—In all the mountain regions of Spain, France, Italy and Switzerland, their declivities, half way up from the plains below to the snowy peaks above, are clothed with magnificent forests of a species of chestnut, the edible fruit of which, imported into this country, is known as the Spanish chestnut. "Gardner's Farmers' Dictionary" contains the following brief description of this "famous European tree." "The European, also called the Spanish or Italian chestnut, is of immense size and longevity, trees being known which have a girth of sixty feet. The wood, except in very old trees is admirable, being more durable than oak in moist situations. The bark is also used for tanning. It prefers a dry, silicious soil, abounding in silicious matters and potash. The European variety is easily raised from the seed, grows rapidly and bears in seven years. The frnit is five times larger than ours and commands a good price in the market. Chestnuts are used boiled, roasted and raw. In Southern France, Italy, etc., they constitute the bread of a large population." From other sources we learn more of its uses and value as a means of subsistence, than is furnished in this meagre account. During the protracted wars which were formerly waged between the mountain tribes and the cities on the plains, the chestnut formed almost the only article of food which the former could command, and without it they would have been starved into submission in a tenth part of the time required to subdue them by force of arms. Indeed, the chestnut enabled the people in the uplands to maintain long periods of *quasi* independence, and to dictate their own terms when yielding. Not only is this nut eaten boiled and roasted, but it is pulverized and mixed with flour for bread, and may be employed in soups, puddings, etc. The nut is exceedingly nutritious and wholesome, and the present day forms an essential an article for consumption, to very extensive populations, as it ever did in early times, when the means of living were comprised within a smaller compass. Barry thus speaks of the Spanish chestnut, or *Marron*: "This is the large, sweet nut, as large as a horsechestnut, imported from abroad. There are many varieties cultivated in France and England, but that cultivated by the French as *Marron de Lyon* is the best. It is propagated by grafting on the common sorts. It is not reproduced truly from seed, but its seedlings produce large and fine fruits. It bears the second year from the graft and the fourth from the seed"

HOW TO GROW ORANGE TREES FROM SEED,—Save the seeds of a half-dozen nice oranges and plant at once five inches apart, in shallow boxes with perforated bottoms. Let the soil be light and rich. In a year the seedlings should grow from eight to twelve inches. Make them of symmetrical shape now. Screen from frost and heat with light muslin cloth. Sprinkle every night. In the Spring of the second year transplant to separate boxes, and graft them if you hear of any fine variety to do it with. In the third year transplant to the open ground, twelve or fifteen feet apart. The trees can be easily transferred, and either kept in the house or moved about at pleasure to beautify different parts of the garden. Young trees can be moved at any time, because the roots, extending in every direction, hold a fine ball of earth around them.—*Ex.*

Christian Fieldstead, who lives in the foot-hills four miles east of San Jose, has ordered 500 coffee trees two years old, which he intends to test thoroughly.

Poetry.

The Closing Scene.

BY T. B. READ.

WITHIN the sober realm of leafless trees,
The russet year inhaled the dreamy air;
Like some tanned reaper, in his hour of ease,
When all the fields are lying brown and bare.

The gray barns looking from their hazy hills
O'er the dun waters widening in the vales,
Sent down the airs greeting to the mills,
On the dull thunder of alternate flails.

All sights were mellowed and all sounds subdued,
The hills seemed further and the stream sang low,
As in a dream the distant woodman hewed
His winter log with many a muffled blow.

The embattled forests, ere while armed with gold,
The banner bright with every martial hue,
Now stood like some sad, beaten host of old,
Withdrawn afar in Time's remotest blue.

On sombre wings the vulture tried his flight;
The dove scarce heard his sighing mate's complaint;
And, like a star slow drowning in the light,
The village church vane seemed to pale and faint.

The sentinel cock upon the hillside crew—
Crew thrice—and all was stiller than before:
Silent, till some replying warden blew,
His alien horn, and then was heard no more.

Where erst the jay, within the elm's tall crest,
Made garrulous trouble round her unfledged young,
And when the oriole swung her swaying nest,
By every light wind like a censer swung.

Where sang the noisy martins of the eaves,
The busy swallows circling ever near—
Forboding, as the rustic mind believes,
An early harvest and a plenteous year,

Where every bird that waked the vernal feast
Shook the sweet slumber from its wings at morn,
To warn the reaper of the rosy east—
All now was sunless, empty and forlorn.

Alone, from out the stubble, piped the quail,
And croaked the crow through all the dreary gloom;
Alone the pheasant, drumming in the vale,
Made echo in the distance to the cottage loom.

There was no bud, no bloom upon the bowers,
The spiders moved their thin shrouds night by night,
The thistledown, the only ghost of flowers,
Sailed slowly by—passed noiselessly out of sight.

Amid all this, in this most dreary air,
And where the woodbine seeds upon the porch
Its crimson leaves, as if the year stood there,
Firing the floor with its inverted torch;

Amid all this, the center of the scene,
The white-haired matron, with monotonous tread,
Plied the swift wheel, and with her joyous mein
Sat like Fate and watched the flying thread.

She had known sorrow. He had walked with her,
Oft supped and broke with her the ashen crust,
And in the shed leaves still she heard the stir
Of his thick mantle trailing in the dust.

While yet her cheek was bright with summer bloom,
Her country summoned, and she gave up all;
And twice war bowed to her his sable plume—
Regave the sword to rust upon the wall.

Regave the sword, but not the hand that drew
And struck for liberty the trying blow,
Nor him who, to his sire and country true,
Fell mid the ranks of the invading foe.

Long, but not loud, the droning wheel went on,
Like the low murmur of a hive at noon;
Long, but not loud, the memory of the gone
Breathed through her lips a sad and tremulous tone.

At last the thread was snapped, her head was bowed,
Life dropped the distaff through her hands serene;
And loving neighbors soothed her careful shroud
While death and Winter closed the autumn scene.

Growing Weather.

I stood one morning where the sun
Had tipped with golden edges,
The brown, bare hollows of the rocks,
And tufts of ragged sedges;
And from the meadow fragrance near,
Where scythes swung sharp together,
I caught the watchword, "swift, my boys,"
For this is "growing weather."

It was a farmer's random thought,
It had a simple meaning;
But chords we touch with careless hand,
Will set a dreamer dreaming,
And by the joyous harmony
Of soul and sense together,
The key-note of my mood was touched,
And echoed "growing weather."

Ah! weak and worn must be the heart,
And comfortless the spirit,
That hears, in this sweet growing time,
No "come ye and inherit;"
That ere not drawn to purer hights,
By every lifting mountain,
And catch no whisper of rebuke
From stainless grove and fountain.

Wake ye, who sleep through harvest hours,
Know but the breath of roses;
And these shall teach more generous life,
Before their short day closes.
Expand to some such perfect grace
As sways the meanest willows,
Or curves the pliant symmetry,
Upon the smoothest billows.

So each high noon shall ripen thee
To fair and fruitful splendor,
And all night silences shall fall
Like prisms soft and tender.
So every morn shall bring to thee
Its new divine evangel,
And wave-kissed lilies show less white
Than the record of thine angel.

Grow on and upward, soul of mine;
For thee the Summers tarry;
And sheen and shade, and voice and mould,
Are wrought from Nature's quarry,
That thou upon the farthest hights
Mayst reach sublimer levels,
And find a better joy at last,
Than that wherein she revels.

The Old Farm Gate.

BY EUGENE J. HALL.

The old farm gate hangs, sagging down,
On rusty hinges, bent and brown;
Its latch is gone, and here and there
It shows rude traces of repair.

The old farm gate has seen, each year,
The blossom bloom and disappear;
The bright green leaves of Spring unfold
And turn to Autumn's red and gold.

The children have upon it clung,
And in and out with rapture swung,
When their young hearts were good and pure—
When hope was fair and faith was sure.

Beside that gate have lovers true
Told the story, always new;
Have made their vows; have dreamed of bliss,
And sealed each promise with a kiss.

The old farm gate has opened wide
To welcome home the new-made bride,
When lilacs bloomed and locusts fair
With their sweet fragrance filled the air.

FLOWER STAND.

That gate, with rusty weight and chain,
Has closed upon the solemn train
That bore her lifeless form away,
Upon a dreary Autumn day.

The lichens gray and mosses green
Upon its rotting posts are seen;
Initials, carved with youthful skill,
Long years ago, are on it still.

Yet, dear to me above all things,
By reason of the thoughts it brings,
Is that old gate, now sagging down,
On rusty hinges, bent and brown.

☞ *After* thirty years' experience in seed and gardening business, Briggs Bros., Rochester, N. Y., are about to issue a practical work on the cultivation of flowers and vegetables. The first number of their Floral Work for 1876 is ready. Everyone who cares for plants, as everyone should, should obtain and study such works.

Fair Play for the Farmer.

BY MRS. S. M. SMITH.

On every side new foes arise,
Or old in modern armor,
Ring above ring, like Alps on Alps,
Frown still upon the farmer.

In vain he, single-handed, strives
To cope with powers united,
Or dreams the wrongs of centuries
Will, of themselves, be righted.

What wonder if at last those wrongs
Have roused each man and woman?
What wonder if they learn to use
The weapons of their foemen?

Turn back the enginery of wrong
Again on its possessors;
Yet, God forbid that the oppressed
Become in turn oppressors.

Though a grand army we enlist,
And don defensive armor,
The only conquest we pursue
Is "Fair play for the farmer."

Our ring endangers no man's rights;
No war of plunder wages;
Its influence yet shall bless mankind
Through all the coming ages.

The wisdom that men slowly gain
They lose not in an hour;
It took us centuries to learn
To find in union power.

And centuries of advancing growth
Will yet mark our progression,
Ere sons and daughters of the soil
Forget their dear-bought lesson.

Nor is the lesson yet complete;
Scarcely our feet have entered
Upon the road that leads to hights
Where Toil's full hopes are centered;

Where the starved soul at Wisdom's founts
May be a free partaker,
And the bent form, erect, clear-eyed,
Honor once more its Maker.

City Gardening.

CARE OF TENDER PLANTS.

CITY gardening, to be made successful, requires a good deal more of practical knowledge and care than the majority of persons are aware. We refer especially to the cultivation of flowers and plants on a small scale, in yards, windows and conservatories, in small beds out of doors, in pots, boxes, hanging baskets, etc., in doors and out. There is so much difference in the hardiness of the various plants, the amount of water and light necessary to healthy growth, the susceptibility to changes of temperature and humidity of the air, and the effect of exposure to winds and drafts, that, all things considered, require much attention. Plants which have been grown under the shelter of glass and protected from wind and weather are not able to bear exposure to winds at all. When you purchase of nurserymen for the yard, be sure to get plants that have been inured to the weather, otherwise you cannot make them live and grow in exposed places. Even as hardy a plant as the rose, if grown under glass, cannot endure exposure. We have known beautiful window plants that had been grown under glass to suffer from raising the window and allowing the draft of cold air to strike over them. As many persons purchase such plants for their yards, verandas and windows, a word of caution should be given.

They must not be placed where the wind has a rake at them, nor be exposed to great changes of temperature. They must be tenderly cared for, regularly and plentifully, but not too copiously, watered; that is, they should not be kept continually soaked with water, as is often done by setting pots in pans filled with water. They must be sheltered

from all winds and from very hot sunshine. When the sun is hottest a thin muslin curtain should shelter the plants from its rays. Hanging baskets that are filled with delicate plants should never be hung out under the piazza, where drafts of wind can dash the foliage about. Many beautiful baskets are ruined by such carelessness, and no one need expect success with plants unless they are sheltered from the winds. California is a windy country anyway, and there are more plants annually spoiled by the winds than by all other causes combined. Piazzas where plants are to be grown should have one or both ends enclosed, so as to give the plants shelter. Gardens, when laid out, should be so enclosed that the prevailing winds will be broken, otherwise many plants will perish and none will flourish satisfactorily. This is a matter of much importance—one which we would particularly impress upon the minds of all, as few seem to realize how severely most plants suffer if exposed to winds. Any one who will be careful can be successful in rearing and keeping in beautiful luxuriance any plant they may fancy, if they will but observe a few common sense principles and humor the plants with affectionate consideration for their wants. The really successful and enthusiastic lover and cultivator of plants almost seems to create a bond of sympathy between herself and her pets that amounts to and is, an understanding of what they need, and insures attention to their wants. But there is no more mystery about the business of growing fine plants than there is about growing potatoes. Each plant is adapted to certain conditions, either through its natural habits before cultivated by man, or through the habits it has acquired since man has cultivated it. For instance, we have just stated that as hardy a plant as the rose naturally is, it can be made too tender to endure ordinary out of door treatment by being nurtured in the greenhouse. The same principle will apply to all plants, although there are extremes of tenderness and hardiness beyond which they cannot succeed. The hardy condition tends toward a more stunted, small leaved and closer branching habit, while the tender plant has larger, thinner leaves, softer wood and comes more rapidly to maturity. The thousands of varieties of geraniums, fuschias, verbenas, etc., that have been produced under culture, show how potent is the power of adaptation, when man understandingly works for a given result.

The condition under which a plant may live is not always the condition under which it will become the most attractive. Success in the culture of fine plants means *highest development* as well as healthy growth, although healthy growth is always necessary to perfect deeplopment. There are always certain conditions best suited to development in any given direction. But we will defer further talk about general principles for the present, although there are many important things to be considered.

FROSTY NIGHTS.

The recent frosts have been rather severe on tender plants that were not sheltered. We have noticed that some persons who have left their plants unprotected have thrown water on them in the morning to draw the frost out without its killing the plants, as is the case where the sun strikes upon the frozen plants. If the water is not thrown on until the temperature rises above the freezing point, it will do this, but if put on very early in the morning it will freeze all the harder. The water will turn to ice unless applied every few minutes until the temperature rises. We have known of plants being killed outright by throwing on a dash of water which was allowed to freeze.

It is cheaper to cover plants from the frost than to buy new ones and wait for them to grow. Many grand clusters of calla lilies have been cut down, in San Jose, by frost, through careless neglect.

PLANTING SEEDS.

The surface soil is better adapted to the germination of seeds than that which is thrown up from below by the spade or plow. It should be finely pulverized, whether in beds out of doors or in boxes. "To secure germination, the essentials are a proper degree of moisture, heat and covering. The most usual hindrances are, that the earth dries down beneath the seed after growth has begun, and that a crust, through which the tender sprouts are unable to push their way, forms over the delicate seeds. Hence they should be given a covering that is porous and light, so that it will retain moisture and not bake and form such a crust." The earth upon which the seeds are planted should be settled down by sprinkling, or be slightly pressed down on the surface; then, after dropping the seeds, cover with leaf mould or sawdust and sand mixed, or rotted spent hops, or old manure sifted fine and mixed with sand, or sand mixed with light soil will do. Any covering that will pack down closely and bake when dry is not fit to cover seeds. "Generally, the covering should not be more than eight times the the thickness of the seed, and is best applied by sifting. This covering should be kept moist, but not wet, till the delicate little plants have come through. The moisture is best retained by spreading a newspaper over the surface and keeping it down with sticks or stones for two or three days."

THE illustration this month is of an elegant bronze flower stand. This can be kept in-doors at the window, or be rolled on its easters out upon the porch when the weather is favorable. A stand of this kind, holding a variety of elegant plants and vines, and a glass globe containing gold-fish, is certainly something to be desired, and almost anyone can get or make something like it. A stand of which this is a picture can be seen at Mr. Mitchell's Floral Depot, San Jose.

Land Holder.

PUBLIC LANDS IN CALIFORNIA.

IF men with families who are hunting for something to do would secure for themselves 160 acres of land almost anywhere in the State, they would find something to do for themselves independently, and could easily make a living, while improving their home in comfort and value, with reference to a competence. The man who secures a homestead of land, places himself outside of fluctuations in values and trades. He is not dependent upon others' business and wages, but within his own little holding is a king. There is no way in which a man can more surely secure himself and his family above want. For the information of such persons as are looking out for land we select this article from the San Francisco *Bulletin*. We frequently get letters asking for just such advice:

In this State there are ten land districts, the offices of which are located as follows: Eureka, Shasta, Susanville, Marysville, Sacramento, San Francisco, Visalia, Independence and Los Angeles. In all these offices, or in any of them, the immigrant can find more or less land that is subject to homestead and preemption; and although it is true that the large valley tracts have been taken, yet along the foothills in the mountans it is not difficult for the home seeker to find and locate a 160-acre farm that in the Eastern States would be considered very valuable. There is land to be had in the following counties by the immigrant or home seeker: Kern, Fresno, Tulare, and in the counties of San Diego and Los Angeles, while in the northern part of the State there is much good land. The valleys of this State will raise cereals for the world as well as for a home population. A recent survey made of the La Poresimo Rancho, in Los Angeles county, ten miles from Lompoc, gave to the United States out of this one rancho 20,000 acres of fine farming lands. This was a special survey, made by the United States Surveyor-General's office of this city.

The *Southern Californian*, published at Bakersfield, in Kern county, makes the following statement:

Some of the best lands in Kern County are yet open to settlement. The lands in township 29 s. r. 27 e., township 29 s. r. 26 e., lying west of the river, are mostly very favorably located, and some recent settlers there are constructing a ditch from Kern river. The surveyor has been at work in these townships for many days past, accommodating a number of new families, who have made their way in wagons from the North. There is room for thousands of settlers in these two townships alone. Bakersfield is situated on the east side of Township 29 south, Range 27 east, so that the outer limit of the two townships will be but twelve miles from this place. Portions of sections 18, 25, 30 and 32 have been applied for within a short time past, but according to the testimony of Mr. McCord and Mr. McCaffrey, who have settled there, the lands remaining are equally good, and are well worth the attention of families seeking for good homes. There is a fair supply of timber on each section, and abundant water to be obtained from the river, which runs through the townships.

As a general thing too little effort is given to search for such locations by new comers. It is found more convenient to buy out some settler already established at from ten to twenty dollars per acre. We know of 160-acre farms having been sold for $2,000 by speculating settlers, who have never made the least improvement, and who have managed to secure other claims, within a few miles, at Government price.

We hope this notice will be read only by *bona fide* settlers, to whom we will cheerfully give all the information needed to make locations, which to some extent can be done without the expense of a surveyor.

SOLDIERS' HOMESTEAD CLAIMS.

The matter has been agitated before our State Legislature to petition Congress to prevent any persons from speculating in public lands with soldier homestead warrants. This is a move in the right direction, although late in the day. We would like to see a bill so framed that none but actual settlers can buy Government lands under any consideration, and then only in limited quantities and only when he holds no other lands. Every scheme of land warrants, whether granted to the State, to school funds or what not, has been gotten up by land sharks to be used for their own aggrandizement, and have been so used. It should be made a crime against our country for one person or corporation to attempt to get more than a limited amount of Government lands; and that limit should be placed low enough to allow actual settlers a show for years to come. We are not one to endorse the principle that capitalists should have the right to more land than anybody else. The land should be for the people, sacred to the settler, above the reach of inordinate speculation. Were land monopoly impossible, there would be thousands of homes in California to-day where there are hundreds. The whole community would be better off. Capital would seek investment in industrial channels, and less idleness and distress would naturally result. As it now is, a poor man is virtually fenced out of the country. Before one can get a farm, he must give somebody the savings of from ten to thirty or more years' labor—somebody who has never added one cent to its value in many cases. Quite as often the desirable lands are held to be rented; and the rental, one year with another, would make a hard-working man a poor slave to the landlord.

It is best that some of the terrible evils incorporated into our civilization should be remedied in a civil manner, before an oppressed and long-suffering people become desperate beyond such control. That land monopoly, in all its forms, is one of the most serious matters that our country needs to consider and to correct, we are well, and too well, satisfied. In the patriotic and heroic days of the Roman republic, he was an enemy to his country who desired more land than he himself could use. But the power that conquered the world finally crumbled through land monopoly. The Senate granted away the land and slavery usurped the labor of a once free people. Virtue vanished; men decayed; patriotism perished, and Rome was no more. May such history not repeat itself in our proud land.

RAILROAD GRANTS VS. SETTLERS CLAIMS. —We are glad to notice that Congress is considering the the rights of the settlers who, in several states, have been ousted by railroad grants. Every honest American believes that our pre-emtion laws were intended to protect actual settlers; and that no grant should be allowed to interfere with such rights. It is to be hoped that the settler will yet find protection against schemers of every grade. But as long as greedy capital has the power, and dishonesty rules, there is little use in hoping.

EVERY civilized nation in the world will take part in the Centennial Exposition. The Commission have determined to close it on the Sabbath—that is on Sunday, the Sabbath of the Christians. If they close on the Sabbath of every nation represented there—and why should the nations be shocked in their moral sense by a failure to do so?—it will always be closed. For the Greeks they will close it on Monday; for the Persians on Tuesday; for the Assyrians on Wednesday; for the Egyptians on Thursday; for the Turks, the Arabs, and all Mohammedan nations on Friday; for the Jews and Seventh-day Baptists on Saturday, and for us Christians they will close it on Sunday, and open the beer-garden for us. *Louisville Courier Journal.*

Capital and Labor.

ASSOCIATED CAPITAL AND CO-OPERATIVE LABOR.

BY JOHN D. SCOTT, M. D.

THERE is no real and *bona fide* antagonism between labor and capital, *per se*. When, however, selfishness on the part of capitalists induces them to lessen the wages of their workmen without just cause, or greed on the part of the laborers influences them to indulge in the doubtful luxury of strikes, then there does arise antagonism, often of a fearful character. But these are really foreign and artificial elements. They are not germain to either. As Wordsworth in his inimitable phraseology declares that "the child is father to the man," the one, in process of time, growing naturally out of the other, so capital is but a legitimate evolution out of labor. Capital could never have had an existence without labor. It is the representative, measure and exponent of labor; and there can be no more antagonism between them than between the bunch of grapes and the vine that has produced it. So intimate is this union between capital and labor that, like "the meeting of the waters," they might be said to merge into one another, thus annihilating the idea of antagonism altogether. One is the compliment of the other, and could no more perform its appropriate functions, alone, than could the single blade of a pair of shears when separated from its fellow. They are mutually inter-dependent, not only for their prosperity, but for their very existence. No wrong-doing, therefore, no oppression, no extortion, on the one side, can long exist without entailing on that side the bitter fruits of loss of business, depreciation of values, loss of interest, loss of skillful workmen who seek other and more promising fields of enterprise, and, as often happens, the total breaking up and ruin of all interests concerned. And, on the other hand, through the misguided counsels of trades-unions and unjustifiable strikes, hundreds and thousands of the working classes have been driven to the verge of starvation and plunged into indescribable ruin. These remedies have not only been shown theoretically to be inadequate to the righting of the wrongs complained of, but practically, also; for the history of these unnatural wars teaches us that they have always been disastrous to both parties.

As these remedies have been found worse than useless, it is pertinent to enquire what would be effective ones. We confidently reply, in the first place,

AN INCREASE OF KNOWLEDGE.

Ignorance is not more the mother of superstition than of error; and error leads to innumerable evils. The universality of education, and the consequent diffusion of knowledge, affords to capitalists and laborers the only known means of becoming thoroughly acquainted with themselves and with each other. It is the rising sun that dispels the darkness of the night and the mists of the morning. It teaches the capitalist that money is not the panacea for "all the ills that flesh is heir to," and that it is not the *summum bonum* of human effort; and the laborer, that "man lives not by bread alone." Something more is wanting to complete the sum of human happiness than capital and labor. These may be the means, but not the end of life.

"Life is real, life is earnest,
And the grave is not its goal;
Dust thou art, to dust returnest,
Was not spoken of the soul."

Culture—a higher plane of civilization—the full and complete development of human capabilities and possibilities, should be the goal of human ambition.

We say, in the second place, that when this knowledge has been attained—when capitalists and workmen thoroughly understand each other—their mutual needs, their combined omnipotence for good—

THIS KNOWLEDGE SHOULD BE PUT INTO PRACTICAL USE.

A few hundred years ago, even among Europeans, such a consummation would have been an utter impossibility. They had not yet been educated up to that plane. Even now, such an idea would be as incomprehensible to the Oriental mind as the transit of Venus to a Hottentot. But, thanks to Dickens and Eugene Sue in fiction, Beranger in song, John Bright and Owen in actual practice and Herbert Spencer in social philosophy, and millions of philanthropic pens and open purses everywhere, mankind is beginning to he redeemed and disenthralled from the superstitions and errors of the ages, and rendered capable of conceiving and establishing those grand industrial institutions that are to civilize and crystalize the best instincts and aspirations of humanity. These are the mighty influences that are slowly, but surely, lifting us to a higher level, as continents rise from the sea. We are but just entering upon this grand and glorious

INDUSTRIAL ERA.

Practical expression was given to it in the Paris Exposition; the reverberations were continued in the English Crystal Palace, and now they are echoed back in centennial thunders from the New World to the Old. In the City of Brotherly Love capital and labor will meet once more, face to face. Again will they join hands over the holy altar of civilization, and the heart's pulsations of each will be felt by the other. On that holy ground, consecrated to the best interests of man, will again be demonstrated, in the presence of the assembled world, the great problem of the compatibility of capital and labor. And the world will now acknowledge the justness of the solution, inasmuch as many co-operative manufactories, in various countries, can be pointed to as successful examples of co-operation. Among these, the great carpet manufactory of John Bright will not be forgotten. It will be shown, among other facts, the larger the establishment—within reasonable bounds—the less the general and individual expense, and the greater the combined profit. When the operatives occupy one building their rents will be decreased fifty per cent. The same, or even a greater per cent. can be saved when all the cooking is done in a common kitchen and the meals served in a common dining-room. The waste heat from the cooking ranges could be made to warm the entire establishment, the rooms occupied by the workmen and their families, as well as the various apartments where the work is done. A laundry could do the washing for the entire community at much less cost than it could be done by each family or worker separately. A hospital would accomplish the same saving in the care of the sick. Of course, water-powers, a strip of timbered land, grain fields and pastures, cows, poultry, etc., would all be *desiderata*. Many other acquisitions which will suggest themselves to the reader, but which we have not space here to enumerate, would lessen the expenses and increase the economical workings of the institution.

The great dining-hall could be made to do duty, on occasion, as a concert room, as a theater, for the purposes of a debating society, for the delivery of courses of lectures upon literature, art and science by distinguished scholars, and as a ball room.

As "honor and fame from no condition rise," in a community like this, endowed with the various tastes and talents found in our common humanity, natural musicians, painters, sculptors, inventors, etc., would spring up and have abundant opportunities to develop and perfect their powers. In this age of "the making of many books" a library would only be a question of time. The community could institute its own schools or send their children to the common schools.

It would be a pleasant task to elaborate this article still further and run out these and other lines of thought to their legitimate conclusions. We might advocate the establishment of a newspaper, a savings bank, a life insurance company, and many other institutions in this our busy little world. We might dwell upon the well-known social principle that the bettering of the condition of the working classes, the increase of their education, and the cultivation of their tastes and talents vastly increases their wants and their capacity for enjoying the luxuries of life and the esthetic creations of genius. We might demonstrate that such a community, set down in a dull town, would soon galvanize it into commercial life and ensure a fortune to every one of its enterprising tradesmen. But we must leave the pursuit of these pleasing thoughts to our intelligent readers. Our lengthening lines admonish us that we are trenching upon our prescribed limits, and that we must bring this paper, which we wish we could have made more acceptable, to a speedy close.

But, to make our institution a truly co-operative one, and to insure its success "beyond all lingering of doubt," the working men, women, and children employed, besides reasonable wages, should be allowed a certain per cent. on the net earnings of the institution. The effect would be magical. It would instantly transform a human machine into an interested, self-respecting worker. While working only for wages, the machine cared only to get through the day's work as best he might and draw his wages every Saturday night. But as an interested stockholder—as a part owner—in the vast estate and buzzing machinery, with what different eyes he looks upon the busy little world around him! He sees everything—hears everything. He encourages a despairing comrade here, chides a lazy one there, and reproves careless ones everywhere. The processes of work which he looked upon before with such stolid indifference, he now studies with the keenest relish, and makes vast improvements in the machinery wherever needed; and having liberal inducements offered him in the way of rewards and payments for patents, this interest is hightened an hundred-fold, not only for the benefit of the worker or inventor himself, but for that of the company at large.

Thus the working men, the women, and even the children are raised to the plane of self-respect and self-assertion. The faculties of the mind are not only unfettered but developed to their utmost capacities. The shackles of blighting poverty, with its pinching cold and gnawing hunger, fall from their limbs in broken links, never to be welded and worn again, for "revolutions never go backwards." Instead of having to trudge with long, weary steps to their work, they are on hand, in the same building with it. Their hearts are not weighed down with the bitter dew-drops of sorrow, nor their limbs stiffened by "November's surly blast." They do not go to their work with the last sigh of human dissolution on their lips, but with the cheery carol of the lark as he mounts up to greet the coming morn. Intelligence flashes from every eye, and the roses of health bloom upon every cheek.

Let not, then, the noble band of workers in the holy cause of human progress despair. Let them remember that good seed in the moral world, like that in the physical, reproduces itself, and that its golden harvest will be garnered up, at last, in the great store-houses of "the good time coming." The bread cast upon the streams of industry, like the Egyptian's wheat sown upon the flooded Nile, will return after many days, to feed, to clothe, to educate and to bless millions yet unborn. Thus is the human race to be raised and enabled to fulfill their great mission, "to subdue the earth." Thus will mankind be brought to a perfect comprehension of the laws of mind and matter—the great principles of the religion of science—that are to perfect their characters and bring them in closer harmony with the attributes of Deity.

Educational.

PROFICIENCY WILL COMMAND SUCCESS.

DOUBTLESS a thorough education is something to be desired and worthy of the ambition and exertions of every young man. It is a life-long source of blessing. But to be half learned is ignorance. Education is not simply book-learning. It is somethiug practical. To have the head filled with theory, and lack the ability to apply, is a burden. There is such a thing as being educated to a point of usefulness; but the one who has stopped short of this is truly an object of pity. Be educated mechanics—be understand workmen, and the world will want your services. "Proficiency will command."

In almost any season of the year, in our cities and towns, numbers of men are to be seen who apparently have little or nothing to do. They live in a hand-to-mouth, semi-starvation way; complain loudly of hard times, no work, and gloomy prospects; curse the country and the people, and blame everything except themselves for their lot.

In a country like this, where Nature seems to have exhausted her genius in creating a home for man; where everything conducive to comfort and happiness is all but spontaneous; a country that has but begun to develop it varied resources—it does appear strange, at first thought, that such can be the case, and we are naturally led to inquire, What is the cause of this? What reason can be assigned for it? It results from several very apparent causes. We will now notice but one. Among this class of men are representatives of almost every trade and profession, and although not the only reason, one of the chief causes of their idleness is to be found in the fact that these are generally very inferior workmen. They are men who have not thoroughly mastered their professions before setting out as journeymen. They are not educated mechanics.

This flooding of the market with an inferior and unprofitable class of work-

men ought not to be wondered at; it is but the natural offspring of our loose apprentice system. A boy gets a year or two's experience at a trade or profession and then he is off. There is no more for him to learn. He knows all about it; or, if he does not, he trusts to his "cheek" to help his ignorance over the rough places. No wonder that such men become "tramps." The imposition is too transparent to serve them long in one place, and they must go in quest of other victims. The printing trade furnish a good illustration of this evil. We are frequently visited by specimens of the genus "typo"—our cities swarm with them—who are out of employment. The difficulty in their case is that they spent a few months, perhaps a year, in some office, then conceived the desire for more wages and started. The consequence is they know nothing of their trade, and must travel from place to place. No one wants him the second time. His memory is like the flies in the apothecary's ointment.

The establishment of schools of mechanical arts would remedy this evil to a great extent, if the management of such institutions could be kept from the hands of ambitious and designing men. As this is almost impossible, and the Constitution of the United States will not permit us to adopt the system of apprenticeship followed in other countries, but one way is left to solve this difficulty and secure skillful workmanship. Let employers pay their men wages in proportion to their merits, so that the impostor and the apprentice may understand that skill and proficiency are appreciated and remunerated, while a low grade of workmanship is a barrier to any and all success. Let the quality, and not the quantity of work done, be the basis of remuneration. Encourage the apprentice to make himself master of his profession. Show him that it is to his interest to be competent. We cannot compel boys to remain under our instructions. We must appeal to their intelligence and interests. In this way we think a vast amount of good might be accomplished, while, if we continue in the way our present course is tending, competent tradesmen will soon be a thing of the past.

One word to the boys and young men who are anxious to be tradesmen. There is plenty of room yet in any trade for you. But you must be able to stand in the front ranks. It is crowded below, but there is room enough for you above. Good workmen are in demand, and always will be, but anything less is already two plenty. The market is deluged with counterfeits and ordinaries. Keep to your place as a learner until you are a regular graduate. Strive to excel in whatever you undertake. Let none stand before you. If you are at the plow, be among the best plowmen; if you are a mechanic, be among the first; if a lawyer, a doctor, a minister or a teacher, be one of the tallest. Stand where you will command. Never allow yourself to be satisfied until you are thorough—until you are master of every detail. No willing and competent man need long be unemployed, whatever his calling is. The world needs and demands the highest and fullest development of your talents and capacities, and *is ready to pay for it.* You need have no fears of a proper appreciation and reward for genuine merit; but you have no right to expect a market for any degree of inferiority. Deception may serve you for a time, but eventually it will leave you bewildered and lost. Have in you the elements of worth, and you will be secure. P. F. P.

REFORM NEEDED IN SCHOOL MATTERS.

If there is one single question of political economy that comes right home to the people, it is the matter of public schools, and the support and management of the same. We are encouraged, by the report of the special committee of the State Senate on retrenchment, to believe that the present Legislature of California will be persuaded to do something towards reforming some of the abuses that have been barnacled upon the system. At any rate, it is by exposing evils that people are to become prepared to contest them. We quote parts of the report upon the use of the school fund:

"Your committee believe that here, as in other divisions of the State economy, reform is practicable, and that discontinuance of State aid to the publication of the *Teacher*, and of the application of the school fund to the maintenance of state and county institutes would relieve the people annually from taxes to the amount of forty thousand dollars; and so far as the institutes are concerned, by preventing the demoralization necessarily attendant on the interruption of school exercises, leave them in a more healthy and efficient condition."

Only think of it, $40,000, which should go towards educating our youth, spent to strengthen the ring that supports a lot of still more expensive figureheads. A ring that debars the people from choosing their own teachers, at such reasonable prices as fair competition would be sure to allow. The *Teacher* publication is of no real advantage in an educational point of view; but few outside of the ring ever see it, or care to see it. As to the teachers' institute arrangement, it could be dispensed with without injury to the cause of education, even if to support it cost nothing.

The Senate committee on retrenchment next pitches into the County Superintendents' office as something superfluous:

"Other subjects of questionable utility connected with the administration of the schools have not escaped observation, and it may be a matter of economic consideration to determine whether County Superintendents form any necessary part of the system; whether the duties performed by them are not more ornamental and expensive than useful, and whether the same services, almost without expense, ought not to be imposed on some other officer. These offices cost the people annually $43,622. Should it prove, on examination, that the office is to a sinecure, its abolition would greatly strengthen the fund that should be sacredly dedicated to the education of the growing youth."

That is sensible talk, too. Over $40,000 more of the people's taxes spent for the privilege of having schools graded to suit high-priced teachers who are often given places from motives of favoritism. We would like to see this matter of choosing teachers and the amount of their salaries left entirely with the school districts—brought home as closely to the people themselves, who pay the taxes and have children to educate, as possible. Then the outside school districts that get now only from three to six months schooling in a year, could get at least ten months, and better schools at that. But the way school matters are at present managed the taxpayers and parents of children are nobodies. The whole thing is manipulated for them by high-salaried "consequentids," who care more about sustaining their own pay and dignity, together with that of their favorites, than for the education of children who need educating.

We regret that the State Superintendent of Public Instruction was not included in the list of figure-heads. In our opinion, if there is an office in the State that is of no earthly use, it is the State Superintendent of Public Instruction. The whole business necessary to be done could be better accomplished by the Governor without extra expense to the people. This onasn figure-head upon the school monopoly ringcosts, in annual salary, $3,000 of the school money; and the last report of this official cost only $10,800 more of the money raised to *teach the children.* To send this ponderous burden through the mails over the State cost about $3,000 more, and nobody benefitted but the aforesaid ring.

Our retrenchment committee next touches upon the system of granting teachers certificates:

"Keeping always in remembrance the vast sum that is now needed, and the much greater sum that will soon be required to keep in successful operation this grand institution [public schools], and remembering that the greatest economy should be observed, and that waste here is no more defensible than elsewhere when dealing with public funds, your committee are persuaded that unless radical changes are inaugurated in the system of granting teachers' certificates, it will prove too burdensome for the public purse. The standard for admission to teach in the primary schools is too high. The nature, quality and character of the examination is often unreasonable, if not absurd, and requires a scale of proficiency wholly inapplicable to elementary instruction. The effect is to exclude from teaching a great many persons of experience and capacity, and to prevent competition for places; creates a monopoly of the school house; maintains a high salary for the favored teachers; makes the system unnecessarily expensive, and the rewards one class of industry, by unequal distribution, beyond all others. The spirit of selfishness which surrounds with difficulties any attempt to obtain a teacher's certificate, finds a counterpart in the exclusive privilege accorded the school house to count a lunar a calendar month."

Complaints have frequently been made ,o us, by competent persons, that the granting of certificates is often a matter of favoritism; also, that it is next to impossible to get a position to teach, excepting through the influence of friends. The matter of teachers' salaries is fixed by the ring of functionaries, as is almost everything connected with schools. The grading business is another link to the chain that needs breaking. Honest competition among teachers is shut out. The trustees of school districts are responsible for nothing, and might as well be wooden men for all the power they have as to who shall teach, or at what salaries, or how many months of school in a year the school money apportioned to their districts shall support, etc.

It is the people's privilege to pay taxes, and grumble if they want to, and that is about all. Those who consume the money with high salaries, in preserving the dignities of their important positions, are set up as educators, and the children can get along with what little is left for high-priced, patronizing teachers.

Until the tax payer and the parent demand that these abuses be remedied, it will not be thoroughly done. So long as there is power and pay open to office-seekers, there will be found an abundance of men ready to seek such offices, and to defend them. We believe that there is intelligence and principle enough among the people to comprehend the importance of this question, and to at once demand a complete reform. We hope every club, literary society, and Grange will canvas this subject with reference to bringing about a more economical, just and beneficial condition of educational affairs, for the sake of right and the good of the rising generation.

Household Reading.

UP-COUNTRY LETTERS---NO. 2.

BY RACHEL A. ELY.

To the mountains! Yes, so the doctor orders; and in languid enthusiasm I assent, feeling that anything would be better than this continued sameness. The very wall-paper is tiresome to me, and the never ending noise and confusion of the crowds in the streets coming and going weary me, while the everlasting eagerness and energy of buyers and sellers puzzle me. What a wonderful enigma is life! and what a work we make of it, too! Why not take it a little bit easier, go slower and enjoy more, instead of rushing it through, as they mostly do, making a labor of enjoyment, even? Why, half my lady friends are literally *slaves* to society and fashion, and the men are *slaves* to business and money making, while the children are *slaves* to book-learning; and none but we invalids seem to take a thought of to-morrow and the soul's needs.

Ah, well, I do believe I shall enjoy the fresh mountain air, the blue sky, away from fogs, and smoke, and breath of crowds. Green grass and growing crops, daisies and buttercups (when I am able to gather them), and the kind, motherly housewives, in simple calico, who sing as they churn the yellow cream; the golden-haired children, dressed for comfort, playing under the trees and simply happy, because healthy; the g ntle low of the cows, nipping the green grass; the whistle of the menfolks at work in the fields—all this floats over my vision. And folding my thin hands, I close my eyes and wonder if indeed I shall grow strong in those new scenes, and ever take my place again among the busy throngs, and do anything to help the world along. No one misses me now save the few who attend my daily wants. But would it be the same if I were well and strong once more, active and full of life, helping the poor and needy and encouraging the failing, giving words of counsel to the weak and sickly, who, like myself, are battling against disease and perhaps death for our portion of health and strength? How I wonder if I ever *shall* till so large a field of usefulness, and *know* I should be missed if not there to fill it! Fearing that I never shall has urged me to do my feeble best now, and this is my excuse, dear readers of the Agriculturist, for writing these Up-Country Letters.

GRANDFATHER'S LETTERS---NO. 6.

EVENTS OF THE LAST CENTURY—INGLEWOOD'S REPLY.

Thank you, dear Aunt Mary, for your very candid answer to the questions about which I was so solicitous, and the encouragement you give for the continuance of the correspondence. You must even be of my way of thinking in this matter, viz: that serious subjects can be discussed more coolly and dispassionately

in bone. The breast does well for kitchen dinner nicely stuffed, and is much cheaper than the other joints.

Sirloins and ribs of beef are very extravagant joints from the weight of bone. The roasting side of the round part of the buttock, and the part called the "top side," are the most profitable for family eating. The mouse buttock is used for stewing; shin is used for soup or stewing.

Washing Woolen Blankets.—A lady writing for the *Household* gives her process for washing woolen blankets: For two or three blankets take one pint of soft soap, two tablespoonfuls of powdered borax and dissolve in boiling water. Add the solution to a tub half filled with cold water, and large enough to contain the blankets; let them stand entirely covered by the solution from twelve to twenty-four hours, then squeeze and rub thoroughly, but do not wring them; put in a basket over a tub and let them drain. Rinse in clear cold water and drain twice, then rinse in blue water, drain and hang up to dry. Be sure to use cold water and not wring during the process, then the blankets will not shrink, but will dry white and smooth.

Favorite Bread Pudding.—One pint of bread crumbs; one quart of rich sweet milk; beaten yolks of four eggs; stir all together and bake in a moderately hot oven till done. Add one heaping teaspoonful of white sugar to the whites of the eggs; beat to a froth; turn it over the pudding and return to the oven to brown slightly. To be eaten with cream and sugar, or pudding sauce, if desired. If wished very nice, a little currant or other jelly may be placed on the top of each dish as it is served at table.

To ruin oil-cloths, clean them with hot water or soap-suds, and leave them half wiped, and they will look very bright while wet, and very dingy and dirty when dry, and soon crack and peel off. But if you wish to preserve them, and have them to look new and nice, wash them with soft flannel and luke-warm water, and wipe thoroughly dry. If you want them to look extra nice after they are dry, drop a few tablespoonfuls of milk over them, and rub them with a small cloth.—*Rural Home.*

Spectacle Wipers.—These are easy presents, and nice ones. You must cut out of soft chamois leather, two perfectly round pieces an inch and a half across, and bind the edges neatly with narrow ribbon of any color you like. Fasten the circles together at the side with a small bow. This is all, but you will find that grandpapa will like it very much. It takes almost no room in his pocket, and is always at hand when he wishes to wipe his glasses, which he is sure to do several times a day.

A little fellow, who was at a neighbor's house about noon the other day, watched the preparations for dinner with great interest, but when asked to stay and eat something he promptly refused. "Why yes Johnny, you had better stay," said the lady; "why can't you?" "Well 'cause," said the little fellow, "ma said I mustn't unless you ask me three times." They invited him twice more right off.

The shortest way the best—Mamma (to Ethel, on their waw to the latter's first party) "Now, mind, darling, if you see any nice things on the table that you'd like to eat, you mustn't ask for them." Ethel—"O, no, mamma!—I'll take them."—*Punch*

box. I like it fully as well as bath-brick.

We have been papering the house, and have found what we consider an improvement on the old plan of dipping the strips of cloth into the paste. We put the paste, with a brush, on the boards, then put the strip on dry and run the paste-brush over it once or twice, and it lays down smooth with no trouble of unrolling the edges. We put on newspapers between the wall-paper and the boards in the same manner.

Looking over an old number of the Agriculturist, I saw an article in which the writer advocated grafting or budding lemon trees with orange cions, giving as a reason that the trees will bear two or three years sooner than without grafting. We would like to hear from those who have tried this method of bringing their trees into earlier bearing. Which is the safer, to graft or bud—and when? How old should the lemon trees be from the seed?

PLAIN CAKE.

One cup of sugar, two eggs, one and a half cups of flour, two tablespoonfuls of butter, grated rind and juice of one lemon, one teaspoonful of soda, two of cream of tartar, four tablespoonfuls of sweet milk.

CREAM CAKE.

One cup of sour cream, two cups of flour, one cup of sugar, one teaspoonful soda, one egg. Flavor with vanilla.

Will some of my sister house-keepers give me a receipt for lemon pies?

NOTES FROM CORRESPONDENTS

Editor Agriculturist: I noticed in your January number "A Devoted Subscriber" inquiring how to wash colored flannels so as to have them soft and bright. I never have any trouble, and this is how I do mine: I use suds that is almost cold, rubbing them immediately upon putting in the water, and rinsing in perfectly cold water, hanging them wrong side out in a good, airy place to dry quickly. If the sun is not very hot I hang them in it, but in Summer I prefer the shade. Some put a few drops of sulphuric acid in the suds, but I do not, fearing it would rot them.

Yours, L. P.

Mr. Editor: Can any of your lady readers tell me how to make mushroom catsup? I am very anxions to know how, as it is very nice. An Inquirer.

Dear Editor Agriculturist: Will not some of your young lady readers tell me how to make those pretty, coral fancy ornaments out of grape-vine branches and egg shells? I saw one the other day, and would so like to make some.

Alice.

Selected Recipes, Etc.

Hints About Meat.—Pepper is a preventive of decay in a degree; it is well, therefore, to pepper hung joints.

Powdered charcoal is still more remarkable in its effect. It will not only keep the meat over which it is sprinkled good, but will remove the taint from already decayed flesh.

A piece of charcoal boiled in the water with "high" meat or fowls, will render it or them quite sweet. A piece of charcoal or powdered charcoal should be kept in every larder. Hams, after being smoked, may be kept for any length of time packed in powdered charcoal.

The leg of mutton is the most profitable joint, containing most solid meat. The neck is the most extravagant joint, half the weight consisting of bone and fat. The shoulder has also much waste

health. These, going hand in hand, each promotes, or should promote, the other. But what is the best health in all these departments, without companionship? This may be most observable in childhood. A child suddenly comes on some new object of interest—a flower, a new one it greatly admires. Is that child content to admire it alone? No; it is plucked to carry to her companion—her mother, perhaps, whose mutual admiration doubles her own joy. If that mother turns from the flower in disgust, it disappoints and dampens the ardor of that child's joy. So, in the intellectual, moral and spiritual, we may have lonesome joy; but how is it enhanced by congenial, suitable, sympathizing companionship!

Such, dear Aunt Mary, is Inglewood's reply to a portion of your letter. Will it elicit a reponse from any member of your family circle? Very truly,

Inglewood.

Men as Lovers.—In the first place, it is an imposition on any well-bred girl to keep her up later than half-past ten o'clock, when you have the opportunity of seeing her often. If you always leave her with the wish in her heart that you had stayed longer, you gain so much. Never run the risk of wearying her with your presence. Be just as earnest and straightforward as in your honorable dealing with men. Impress your friends with the worthiness and seriousness of your love, so that vulgar and senseless bantering will appear to them as such. Love is religion—the supremest happiness, wear it manfully and proudly, but nobly. Woo a woman bravely. If there is anything humiliating to a woman, it is to have a lover, whom she wishes to honor, weak and vapid, ever yielding and half afraid of her. She longs to tell him to "act like a man." The man who conceals or denies his love for fear of being laughed at, is a coward. A love that has no element of divinity in it is not love, but passion, which, of itself, has nothing enobling. That was a beautiful inscription on an engagement ring, "Each for the other, and both for God."—*Miss Abbie Terry.*

Domestic.

FAMILIAR TALKS---No. 6.

BY SNIP.

My deaf "Busy Bee," do not think me ungrateful for the advice about my chickens. Owing to the late receipt of the Agriculturist, a portion of my letter for January was written before I had the pleasure of reading your letter. So far as I have put "Busy Bee's" suggestions into practice, the result is satisfactory.

I had my attention called, the other day, to a rather novel article used for scouring knives. The materials required are a piece of board about four or five inches wide and about as long as a knife blade, and a piece of heavy carpet as wide as the board and twice as long. One half the carpet, lengthwise, is nailed to the board, the other half being left loose. The brick-dust is placed on the carpet, the knife is placed on it, the other piece laid on the knife and held with the hand while the knife is drawn in and out. Apparently, the work is done easier and quicker than by the old method of using a rag and brick-dust. For some time past I have been using the sand that falls from the grind-stone into the water-with the pen than *viva voce*. More apt are we to make slips of the tongue which cannot be recalled, than we are of the pen; so I cheerfully accede to your suggestion as to what are my views of that ulterior object I may have in view—matrimony; also, as to those sterling masculine qualities, equally essential as the feminine ones on the other side.

More than a quarter of a century ago I remember to have heard man, and woman too, in a single state, compared to the separate halves of a pair of scissors. True, they can exist and not wear out any quicker in this separate condition; but these halves, when brought together in a perfect match and fit—how nicely they do their work! what useful instruments they are! Though this is a very poor analogy, it seems to show the incompleteness of man alone; that there is something more wanting; a yearning for companionship in all the departments of our nature, from the physical up to the very highest—the spiritual. As in the scissors comparison there must be adaptability, a fitness of parts, just so in the other case—in the physical conditions and circumstances; in the intellectual, tastes and sentiments; in the moral, right and wrong; in the spiritual, hopes, expectations and aspirations; and what are all these, wandering through life's dreary path alone, as compared with what they are in congenial, suitable companionship, by one's own fireside?

Such, dear Aunt Mary, is the companionship I am hunting for; and for life's results in this direction I assure you I feel no little responsibility, extending even into the next world. Under one or other of these departments of our nature are to be found those sterling masculine qualities of our nature (and feminine qualities, also), that in conjunction are so promotive of happiness. To reply to your inquiries with equal candor and frankness with your own good letter, I begin with the physical conditions and circumstances. Here it is for you to judge how my choice coincides with my principles. My principle is, that man being the chooser, having the wide world before him, being the more positive agent, on him must rest by far the greater responsibility; and that it is only by promoting the happiness of her whom he takes to his bosom that he promotes his own. Therefore, I have to ask myself how far and to what extent arc the darling Angie's condition and circumstances to be altered by the changes in homes I propose for her. A country life, as she has been accustomed to, and the interior department consigned wholly to her care, I may hope in time that it may conform wholly to her wishes. She will have to trust to my love, my honor and efforts for *my* endeavor to make it so; but mainly to the first of these, for if that abounds the others flow forth spontaneously. Of Angie's sterling feminine qualities I am well convinced, for I have been a close observer, and it now remains for Aunt Mary, dear Ma and the beloved Angie herself to scrutinize the qualities of Inglewood on the other side and from the same standpoint; and I may hope to be allowed they should have the opportunity to do so. I claim for him to be free from a love of club-room pleasures, and all those of a more sensual nature, that lead men from the love of and study of the welfare of their families to mere selfish gratification. I know, too, how he appreciates physical health as of the very utmost importance; that neither man nor woman should enter the sacred precincts of matrimony without it; and how it is best promoted by being joined with intellectual, moral and spiritual

Women.

Going Away.

And so you'll soon be going away,
My darling little Bess;
And so you ha' been to the store to-day
To buy your wedding dress.

And so your dear good mother and I,
Whose love you long have known,
Must lay the light of your presence by,
And walk the road alone.

So come along with your mother an' me,
To the porch for an hour or two,
And sit on your old father's knee,
The same as you used to do;

For we who ha' loved you many a year,
And clung to you, strong and true,
Since we've had the young professor here
Ha' not had much of you.

But lovers be lovers while earth endures,
For once on a time, be it known,
I helped a girl with eyes like yours
Construct a home of our own.

And we laid it out in the garden spot,
And dwelt in the midst of flowers,
Till we found the world was a good-sized lot,
And most of it wasn't ours.

You're heavier, girl, than when you come
To us one cloudy day,
And seemed to feel so little at home
We feared you wouldn't stay.

Till I knew the danger was passed, because
You struck so mortal a track,
And got so independent and cross
God never would let you back.

But who would ever ha' had the whim,
When you lay in my arms and cried,
You'd sometime sit here, pretty and prim,
A waitin' to be a bride?

But lovers be lovers while earth goes on,
And always will be, I ween,
But if you would keep the heart you've won,
Remember what you've been taught.

Look first that your wedded lives be true,
With naught from each other spart;
For the flowers of true love never grew
In the soil of a faithless heart.

Look next that the buds of health shall rest
Their blossoms upon your cheek:
For life and love are a burden at best,
If the body be sick and weak.

Look next that your kitchen fire be bright,
That your hands be neat and skilled;
For the love of a man oft takes its flight,
If his stomach is not well filled.

Look next that money is fairly earned,
Ere ever it be spent,
For comfort and love, however turned,
Will ne'er pay ten per cent.

And next, the care and diligence keep
That the mind be trained and fed;
For blessings ever look shabby and cheap
That light an empty head.

And if it should please the gracious God
That children to you belong,
Remember, my child, and spare the rod
Till you've taught them right and wrong.

And show 'em that though this life's a start
For the better world, no doubt,
Yet earth an' heaven ain't far apart
As some good folks make out.

—[Will J. Carleton.

WOMAN'S WORK --- CONGRATULATIONS.

EDITOR AGRICULTURIST:—Will you permit a few words of greeting from a stranger? Not entirely a stranger, but it is only within a short time that the AGRICULTURIST has come under our observation, and upon the coming out of your January number, we were strongly moved to send you our congratulations upon its new dress and improved appearance. Having a fine corps of able contributors, with its increased beauty and attractiveness, it must continue to grow and develop to full perfection. It has not now a peer among first-class and impartial journals.

I am told, Sir Editor, that this beautiful design and ingenuity of construction of the AGRICULTURIST's present attire is a woman's work. If it is so, we are proud of it. Nothing so satisfies us for being a woman as to know and see what useful, beautiful and grand things women have done and can do. We honor our own sex more and more every time we hear of a woman's having done, or attempted to do anything that ennobles and endows her with the qualifications for advancing humanity's interests, making the world better for her having lived in it. Whether every undertaking is a success or not doesn't matter; effort only proves the ability, as a sex, to do, to be, and eventually to compel the world's recognition and appreciative plaudits of power and of worth.

But what we wished to say was this: that you, with your generous recognition of feminine ability, and sympathy with its present position socially and intellectually, will not omit to give this work its full meed of praise and justice. We are sure you will not, for you know, dear sir, that as the matter stands to-day women get but very little share of praise or encouragement for what they do, try to do, or for what they in reality accomplish. Masculinity (God bless the men, anyhow) gets the lion's share of the credit for even women's labor and achievement, in this nineteenth century. We venture to say, however, that a large proportion of all the elegancies of design and execution, in almost every line and province of human labor and success, if it could be found out, is traceable to the busy, aching brain, the toiling, weary fingers of women behind the scenes. And to think of it! so much—oh, so much of the beauty, grace and perfection of the artistic, so much of the utility of the useful, which will be exhibited at Philadelphia, has received enough of woman's best thought and best work to forever immortalize us as artisans of handicraft; and wrought, too, by women of the deepest obscurity, the severest toil, the most abject and complete social and mental enslavement.

But as a sex, we will yield the point gracefully and prettily, as we can now, fully confident that when the American nation shall have another *Centennial*, woman will then come, not in the rear but in the van, standing where she should have stood, not only 100 years ago but from the beginning of Time. Therefore, as we women cannot, and would not if we could, do without the men, we will still continue to humor their peculiarities and whims, because we sincerely believe that if ever they do come to their senses their reparation will be so full and complete that they will be in danger of erring as far the other way, to wit: of doing us, in degree, as much too much honor as now they do us too little.

Your pardon, sir, for want of brevity. We did not contemplate this tirade in the beginning; indeed, we had nothing to say, except to tell you how nicely your new paper looked, and also how glad we are to know that women designed and engraved its title page. And now, if this should not prove objectionable, we may, with your permission, have something further to say about our sex, together with matters and things in general. C. H. D.

SAN JOSE.

ORANGES NEAR SONOMA.—The *Democrat* says that General Vallejo has 200 flourishing orange trees. 100 of them are in full bearing. As many as 600 oranges have been taken from one tree. He has, perhaps, the largest number of pomegranate trees in any one place in the State—fifty bearing trees. He has a full grown magnolia and a banana tree.

Correspondence.

"DEEP PLOWING" REPLIES.

EDITOR AGRICULTURIST:—Permit me to reply briefly to Mr. Burrell's *critique* on "deep plowing." He starts out with saying that mountain lands will not admit of deep plowing. That may be so, but I dare affirm that but few, if any, have tried it; so that is merely a matter of opinion, and is a mere evasion of my facts. His next statement is, that the wheat plant has no tap-root, and characterizes my statement as mere "assertion." I am sorry to find any one professing to be a farmer capable of making such a statement, which is its own refutation. This denial is so simple and explicit as to be unpardonable. Any farmer can satisfy himself as to the tendency of the wheat plant under the differing conditions of deep and shallow plowing. Four years ago I deeply plowed part of a field one mile from San Jose, that had been consecutively cropped for ten years, and was thought to be worn out. It had never been plowed more than three inches deep before. It is a fine sandy loam and suffers considerable from drouth. I handled the soil strictly according to my experience. I had a *hobby*—thoroughly pulverizing the soil and then consolidating with a heavy roller after the grain was up. On the part deeply plowed I had as heavy a crop as the first that was ever raised upon it. On the part plowed about three inches deep, I had about eight sacks to the acre. So much for *facts*.

This is but one instance among many with the same results. It is a little amusing how your correspondent instances his "garden" and "grape patch" in which he experimented with deep culture, as an offset to my facts about deep plowing. I have no doubt that any one can spoil a garden patch of virgin soil, as his must have been twenty years ago, by trenching it two feet deep. It must have been a curious "hobby," that stimulated our friend to such untimely and excessive digging. But I was not writing about a garden or grape patch. I ventured a few thoughts to practical farmers—to men who can discriminate between a garden patch of virgin soil and an exhausted wheat field; and I stated facts which cannot be controverted. I have tested this thing so thoroughly, with the assistance and in the presence of the best advised and most scientific farmers, and under differing conditions of soil and climate, and do not know of a single instance where deep plowing on exhausted lands, followed with the culture I insisted on in my December article, has not been productive of the most satisfactory results; and when shallow plowing has been a total failure alongside of it.

NEW AGRICULTURAL PATENTS.

Issued by the United States Patent Office from Dec. 19th, to Jan. 14th.

[Reported for the CALIFORNIA AGRICULTURIST by Louis Bagger & Co., Solicitors of Patents, Washington, D. C.]

Rotary Spade Cultivators, D W Brodnex, Sr., Rockdale, Texas.
Mowing Machines, Wm C Douthett, Springdale, Pa.
Check Row Planters, Wm H Johnson, Farmer City, Illinois.
Bee-Hives, Elvin Armstrong, Jerseyville, Illinois.
Processes of Preparing Preserved Fruit, Jno F Bosford, New York, N. Y.
Grain Conveyer Shaft, Henry I Chase, Peoria, Illinois.
Fences, Wm A Couch, Hannibel, Nevada.
Corn Planters, Conrad Gruemer, Dale, Wis.
Plowing and Seeding Machines, D McVaw, Gallisin, Texas.
Plows, Joseph Philips, Smithton, Illinois.
Butter Carriers, B F Roberts, Bennington, Vermont.
Gang Plows, Timothy M Shaw, Lebanon, Tennessee.
Hay Loaders, Chas M Young, Meadville, Pa.
Sway Bar Guides for Harvesters, W R Baker, Chicago, Illinois.
Grain Separators, D H Caswell, Nashville, Tennessee.
Seed Planters and Fertilizer Distributers, M P Curlee, Corinth, Miss.
Fences, Jno Dwyer, Marion, Ohio.
Hand Seed Planters, Thos J Hubbell, Napa City, Cal.
Reciprocating Churns, Wm McKinley, Bellaire, Ohio.
Cultivators, E B Moore, Bell's Mills, Ala.
Feeding Belts and Partitions for Corn Shellers, Wm B Quarton, Freeman, Ohio.
Corn Drill, Jno R Rude, Liberty, Ind.
Grain Separators, C F Butterfield, Garden City, Kansas.
Adjustable Locks and Dogs for Hay Elevators, J R Fitshons, Centre Hall, Pa.
Grain Meters, B M Sulliam, Tolmo, Ill.
Reel Rakes for Harvesters, R C Taylor, Brockport, N Y.
Milk Coolers and Heaters, M L Bush, Huntington, Ind.
Self Rakes for Reaper, S B Gillsland, Salisbury, Mo.
Corn Husking Implements, H W Hill, Decatur, Ill.
Plows, Henry H Habley, Central Manor, Pa.
Manufacture of Grian Cradle Fingers, C P Kelsey, Richmondville, N Y.
Grain Separators, L Theobald, Plainwell, Michigan
Churn Dashers, Jno R Underwood, Nelsonville, Ohio.
Wheel Harrows, F Bramer, Little Falls, N. Y.
Churn Dashers, R M Case, Auburn, N Y.
Plows, N G Pinney, New Hudson, Mich.
Combined Reels and Rakes for Harvesters, H Sales, Philadelphia, Pa.
Hooks for Harrows, J D Tracy, Sterling, Illinois.
Plows, Jno Worrell, Clayton, Ind.
Bee Hives, Daniel Cox, Kingston, Mo.
Convertible Revolving Harrows, Benj G Devoe, Kenton, Ohio.
Milk Coolers, M D Ferguson, Carthage, New York.
Grain Separators, Lewis W Hasselman, Indianapolis, Ind.
Potato Diggers, Robert Heydemann, Krebsow, Prussia.
Clover Separators, Geo F Metzger, West Fayette, N. Y.
Milk Coolers, Isaac H Wonzer, Elgin, Ill.
Churns, Daniel McCarty, Croppers' Depot, Kentucky.
Apparatus for Storing and Preserving Grain, Baas P C Lassen, Chicago, Ill.
Gang Plows, J K McCormick, Georgetown, Texas.
Corn Stalk Knives, Peter C Moore, La Fayette, Ohio.
Portible Fences, Isaiah W Pancoast, Libertyville, Iowa.
Drag rake Handles, Hugh Smith, Passumsic, Vermont.
Portable Fences, Horace Tell, Bristol, Md.
Churns, James Watson, Port Colborne, Canada.
Stump Extractors, J A Hart, Tionesta, Pa.
Horse Rakes, Chas B Perkins, Kenduskeag, Maine.
Cultivators, Joshua Pierpont, Bushnell, Ill.
Horse Rakes, Wm C Raynor, Milwaukee, Wisconsin.
Sulky Plows, H Richardson, Janesville, Wis.
Plows, Jno Sewell, Bowdon, Georgia.
Drills and Fertilizer Distributers, Aladun Wishart, Lumberton, N C.
Grain Binders, J F Appleby, Beloit, Wis.
Plows, Asa Hall, Rockford, Ill.
Farm Gates, Wm J Hollis, DeWitt, Mo.
Fruit Pickers, John Mooney, Providence, Rhode Island.
Hay Loaders, Geo E Peck, Geneva, Illinois.
Seed Separators, Jno L Catchpole, Framsden, Great Britain.
Cultivators, Joseph W Case, Middleport, Ohio.
Straw Cutters, John Grimm, St Louis, Mo.
Yielding Teeth for Seeders and Cultivators, C P Hewitt, Kingston, Wis.
Land Rollers and Markers, James M Hunter, Chariton, Iowa.
Steam Plows, Benj S Benson, Baltimore, Md
Cider Presses, L O Rockwood, Ottawa, Ill.,
Potato Bug Destroyers, Isaac W Griscom Woodbury, N J.

Boys and Girls.

Ten Little Country Boys.

Ten little country boys
Underneath a vine,
A darning-needle frigutened one
And then there were but nine.

Nine little country boys
Swinging on a gate,
One turned a summersault
And then there were but eight.

Eight little country boys
Learning about heaven,
One fell fast asleep
And then there were but seven.

Seven little country boys
Full of monkey tricks,
One rolled down the hill
And then there were but six.

Six little country boys
Going to rob a hive,
A bumblebee stung one
And then there were but five.

Five little country boys
Asking for some more,
One burnt his little self
And then there were but four.

Four little country boys
Climbing up a tree,
The farmer came and whipped one
And then there were but three.

Three little country boys
Gaily dressed in blue,
One tumbled overboard
And then there were but two.

Two little country boys
Both named John,
One knocked the other down
And then there was but one.

One little country boy
Living for a penny,
A little fish swallowed him
And then there wasn't any.

—[St. Nicholas.

Expectations.

Every little grape, dear, that clings unto a vine,
Expects some day to ripen its little fruit so fine;
Every little girl, I think, expects in time to be
Exactly like her own mamma—as grand, as sweet, as free;
Every little boy, who has a pocket of his own,
Expects to be the biggest man the world has ever known;
Every little baby-wig that makes its little wail,
Expects to be a great big pig, with a very curly tail;
Every little lambkin, too, that frisks upon the green,
Expects to be the finest sheep that ever yet was seen;
Every little baby colt expects to be a horse;
Every little pup expects to be a dog, of course.
Every little kitten pet, so tender and so nice,
Expects to be a grown-up cat and live on rats and mice;
Every little fluffy chick, in downy yellow dress,
Expects some day to crow and strut or cackle at its best:
Every little baby bird that peeps from out its nest
Expects some day to cross the sky from glowing East to West:—
Now every hope I've mentioned here will bring its sure event,
Provided nothing happens, dear, to hinder or prevent.

—[St. Nicholas.

"NELL VAN'S" TALKS TO THE CHILDREN.

ABOUT THE USE OF SUGAR.

ALL of you little folks are fond of sugar, I dare say, and many a hard cry has been quieted by a lump of nice, crisp white sugar. It is so comforting, when one feels out of sorts, to have a sweet morsel to roll under one's tongue. A drop of essence of lemon on a lump of sugar tastes almost like lemon candy, while the essence of vanilla, dropped on sugar, is like ice cream, only not as cold. Some people think sugar is not good for children, and we all agree that too much sugar takes away the appetite for other food and causes a craving for sour things. Now, we cannot live on sugar and be well. I once heard an anecdote of a colony of people who had eaten up all their stores of flour and other things, and were reduced to nothing but sugar. They lived upon it for quite a while, and when help came to them they were found greatly reduced in strength, and their complexions were singularly transparent; which shows us that sugar does not contain sufficient nutriment to support life. Extreme indulgence in the appetite for any one thing is intemperance, as temperance is, or rightly should be, defined—the moderate use of anything which is injurious if indulged in to excess.

Eating too much sugar causes an acid to form in the stomach by fermentation, which sends forth fumes through the throat and mouth that affect the teeth, causing their early decay. Children don't like to have the toothache, I know, and a disordered stomach is sure to affect the teeth. Food gets lodged between the teeth while eating, and if not picked out with a broom splinter, or brushed out of the mouth with cold water, the walls of the teeth, which are of fine enamel, become softened and decay, letting in the air to the nerve and causing intense pain. Therefore, children with decayed teeth complain when sugar or acid is taken into the mouth. Keep your teeth clean and your stomachs healthy if you would avoid suffering.

But there is another use for sugar which I would like every child to know. When any of you catch cold in the head, and have your nose stopped up so that you can scarcely breathe except through your mouth, do you go straightway for a teaspoon of fine, pulverized white sugar, and snuff as much as you can, or take a pinch of it between your little thumb and finger and press it up into the nostrils; then lie down or hold the head back so that it can penetrate through the stoppage. Presently the passage will be thawed out, and after using your handkerchief your nose will be relieved of its disagreeable condition. What little boy or girl likes to go to table when the nose is so stopped up that it is impossible to eat comfortably, to say nothing of the peculiar way of pronouncing words which commence with the letter *m*. For instance, mamma says, "John, what is the matter with you this morning?" and he replies, "nothidg is the batter with be, ba'am." She replies, "I should say there was, when you pronounce your words so badly. You talk about 'batter,' and 'be,' and 'ba'am.' Why do you not talk so that you can be understood? It reminds me of the young man who went to serenade his lady-love, and had such a bad cold in his head from being out in the night air, that he sang that pretty song like this:

"'Cub, oh, cub with be,
The bood is beabidg,' etc."

Now, if I had been John's mother, I should have given him a spoonful of sugar snuff, and sent him in the other room to clear out his head to relieve him. I know a mamma that used to put sugar snuff up baby's nose when it had the snuffles, and you don't know how soon the little thing could breathe freely. Yes, children, sugar is a most excellent thing to have in the house, and if it were not good for anything else, it would be indispensable in every family for snuff. Don't forget this; but try it the first time you get a cold, and see if what I tell you is true.

GRANDMA'S TALKS---EASY LESSONS FROM NATURE---NO. 2.

Well, children, here we are again, a little earlier this month than last. Grandma will talk to you this time about Nature, or the things which surround us on the earth. Johnny tells me that he learned, from last month's talk, that everything was either solid or fluid. Lucy (who is quite a little girl) explains the difference between the two in this way: "Solid things we can take hold of and pile up, but fluids run all over, unless we keep them in bottles or such things." Is that a good explanation, do you think? Johnny laughs at it, and says that dogs, cats and chickens would run all over if we tried to pile them up, and asks Lucy if they are fluids. Grandpa tells Johnny that perhaps it is the fluid in them that makes them run so fast. But Lucy thinks our serious talk ought not to be interrupted by fun, and Johnny knows she is not talking about live creatures, but only *things*.

Did you ever think that there is not a place on the earth where there is *nothing*? Here is a box which I open, and Johnny and Lucy both call it empty; but it is quite full of something—what is it? What do we breathe? Johnny did not know that the air is anything, but yet he knew if it was taken away from him, only for a few minutes, he would die. Do you see or feel the air? When I move this fan Lucy says she feels it, and I am sure we can all see it by looking up to the clear sky. Children, will you look at it and see what a beautiful color it is? Is the air a solid or a fluid? Can you pile it up or take hold of it, or does it "run all over" as Lucy says a fluid does? Johnny thinks the air does run all over, because it seems to be everywhere, and he can't push it away. Then it must be a fluid which we are living in, just as the fishes do in water. Lucy laughs at that idea, but isn't it true? Hark! hear the whistle of the locomotive as the cars go whizzing by towards San Jose. What is it makes such a noise? You say, Johnny, that it is made by steam instead of wind: now, what is steam? Lucy says it is something that is made by water boiling; she has seen it come from the spout of the tea-kettle, and if we let it boil long enough, there will be no water left in the kettle. If that is true, then water takes two different fluid forms—liquid and air, or steam, which disappears in the air. Did any of you ever see solid water? Lucy thinks Grandma is making fun now, but Johnny remembers that he saw ice in town and snow on the mountains. These are both solid, yet turn to water when held in the hand. So, then, water is sometimes *solid*, sometimes *liquid* and sometimes *air*. Next time you shall try and tell me what causes water to change its form, for certainly you all know.

HOW GEORGIE'S TEN CENT DOLL WAS CHANGED INTO A PAIR OF SLIPPERS.

BY HELENA.

Georgie is a little girl who lives in San Jose. Last year, during Fair time, there was a tent all decked out with bright colors, where flying horses for children to ride revolved round and round, stopping when the riders wished to dismount for others to take their places for a ride. As Georgie and her mamma were passing by, the little girl begged to stop and take a ride on the pretty wooden horses with side-saddles on.

Her mamma gave her ten cents and said: "Now, my dear, which would you rather have—a ride on one of those flying horses, or a ten cent doll which will amuse you for hours and days?"

The child thought for a moment and then said: "Oh, Mamma, I believe I'd rather have a ten cents doll."

"Very well," said her mamma; so they passed on to a toy store, and there bought, with the ten cents, a pretty doll. Day after day Georgie found much joy in her "ten cents doll," as she called it; and as the little girls in the neighborhood made dresses and aprons for it, she played go to the dressmaker's and then out calling, as grown folks do.

After a time Georgie went to San Francisco for a visit to her aunt and cousins. Of course the "ten cents doll" went along in Georgie's trunk. Once when she had gone to Oakland to spend the day her little baby cousin found the doll, which had been left at home, and played with it till both feet and one arm came off. When she came back and found what baby had done, her aunt gave her another ten cents to buy a new doll, because baby had broken hers.

"Thank you, Aunty dear," said the happy child; then turning to the baby she said, "now the broken dolly's yours and this ten cents is mine." So, going down town with her other cousin, she asked her to keep the ten cents for her till she wanted it.

Something new happened every day, so the doll was forgotten; and the day she started off on the steamer with Cousin Ben the doll had never been bought and her cousin had spent the ten cents, so she gave Georgie a bright quarter instead. Georgie accepted with many thanks, and entrusted to Cousin Ben's care. They were going to Santa Cruz, where her mamma had gone for a visit, and the bright quarter was spent for oranges to eat on the trip.

"Now, Georgie," said good Cousin Ben, "which would you rather have—a quarter or thirty cents?"

"Oh, I'd rather have thirty cents, of course," said she; which quite surprised the young man to find so young a child knowing the value of money. When they reached Santa Cruz and he found he had not the exact change, he threw out upon the table a half dollar and said:

"Here, Georgie, is your money; that's near enough, I think."

"Oh, it's more, Cousin Ben; you told me thirty cents and here's fifty—twenty cents too much. Am I to have it? Oh, goody! Thank you, sir. See, Mamma, what my ten cents doll has grown into!" Then begging her mamma to keep it till she wanted to spend it, the money was slipped into Mamma's purse.

One day when Georgie had nothing to do, she asked for her money to go and buy something. Her mother took from her purse the half dollar and a quarter, saying, "see, now, Georgie, how your ten cents has grown since it came into my possession! Now let's see what you can buy with it."

Delighted beyond expression, the child danced off down town alone to spend it. Candy or fruit she would not buy because they wouldn't last, and even dolls got broken; so, in passing a shoe store, she saw a lovely pair of slippers in the window. She stepped in and inquired the price. They were a dollar, the man said; but when he saw the disappointed look of the child as she turned the money over in her hand and started to go, he said, good-naturedly. "Well, Miss, you may take them along for 75 cents, this time."

Thanking him kindly, she hastened to lay the parcel in Mamma's lap, saying: "See the pretty new slippers I have bought with my own money."

Everybody laughed when the story was told over, and all agreed that Georgie was a most fortunate child to be able to have a ten cent doll changed into a pair of slippers.

Vegetable Garden.

TIMELY SUGGESTIONS.

VEGETABLE gardens, on farms where land is plenty and persons cannot devote as much time to them as the professional gardener does, can be economically carried on by allowing more space between the rows, so as to admit the cultivator to do a good deal of the work of weeding. Weeds are the greatest enemies to be contended with, and it will not do to allow them to grow amongst the plants, rob them of nutriment and crowd them for room in which to freely grow. The farmer who starts a vegetable garden will be likely to get discouraged if he doesn't like to pull weeds from among the tender young plants, and to use the hoe vigorously and often. It will not do to give the weeds the least advantage. They must be gotten rid of. A good way to plant carrots, beets, turnips, parsnips, etc., is to plant in double rows; that is, two rows eight inches apart, and three feet between the double rows, so that a horse cultivator can run in the wide spaces, and the hoe will be used to clean the weeds about the plants and in the narrow space. In this way the whole garden can be laid out uniformly for almost everything. Cabbages and tomatoes will need the entire space in one row. This late in the season manure for a garden should be put upon the surface after plowing, and dragged down with a harrow finely. When applied in the Fall, which is the best time, it should be spread upon the surface and the seeds not allowed to germinate before plowing; then by plowing under and cross plowing so as to mix thoroughly with the soil, not too deeply, it will be in the best position and condition to benefit plant growth.

In planting seeds, instead of digging a line to put them in, press down the earth with a wheel or rake-head, an inch below the level, drop the seeds and cover lightly with finely pulverized soil, then press this gently upon them. The object of this is to have each seed firmly bedded in fine soil, which will gather moisture from below and cause the seed to surely sprout. With a firm bed under the seed it will break through the covering without cramping and grow rapidly. Should a shower cause the surface of the soil to form a crust before the seeds break through, it should be carefully removed to allow the tender shoots to spring upwards; otherwise they may become cramped down and die before seeing the light. The chickens should be kept out of the garden until the plants are too large to be injured by scratching. After that they will do as much good as harm, by destroying insects. If the hens do eat some vegetables it will do them good. Hens need green feed the year round, and should have it, too, from some source. It will pay to plant onions and beets for the hens.

Persons who are not used to sowing vegetable seeds are likely to put them in too thick, the seeds are so small. Use judgment in this matter, and where too thick, thin out the plants while young, and transplant where there are places needing more.

CHUFAS.—Chufas or earth almonds are a grass nut but not a nut grass. The nut grows to the size of a small gonber, and I have frequently grown a quart from a single nut. On land that will make twenty bushels of corn, one hundred bushels of chufas can be raised easily, and one bushel of chufas is worth two of corn, as I will demonstrate. The chufas delight in a light, sandy soil, but will grow in any soil. They may be planted any time from December to April, as they never rot in the ground or are injured by cold or frost. I plow the land smooth and lay open shallow furrows two feet apart, and in this furrow drop single seeds twelve inches apart, and cover with a board. The seed will vegetate the first warm weather, and soon show a green line along the row. The green spires will eventually meet across the rows, each spire having a nut at the bottom in the ground. The nuts do not grow more than two inches in the ground, and the hogs fatten on them in Winter, when all other crops are in the jut or barn. This is a great advantage over all other crops—no digging or storing. Poultry are very fond of them and soon learn to scratch for them, and, as they grow so near the surface, find no difficulty in getting them. It is said the peculiar flavor of the canvas-back duck of the Chesapeake is derived from the wild celery they feed upon, but epicures can have no conception of delicious game or poultry unless they have eaten chickens fattened on chufas. I have parched and ground them, and find them superior to chocolate as a breakfast drink. When we take into consideration all its good qualities—its fattening properties, its easy culture, its hardiness, and the fact that hogs will dig them as they want them, without wasting them—it is the most valuable seed the Patent Office has ever sent out, and is destined to prove a great boon to the South.—*Chas. A. Peabody in Southern Plantation.*

SALT FOR CABBAGE.—A New Jersey gardener considers salt necessary to the development of cabbage, especially in places far from the coast. He finds them more crisp, of better flavor and to keep better when salt is used than without. He used it as follows: A few days after setting out the plants, and when they are damp, either after a rain or when the dew is on, I take a small dish of fine salt, and walking among the rows, sprinkle a little pinch of salt on the centre of each plant. When the leaves begin to grow I repeat the salting, and when the centre of the leaves begin to form the head I apply salt again, scattering it over the leaves. After this I look them over occasionally and if I find plants that do not head well and appear diseased, I sprinkle the salt over freely. This will save all such plants. A quart of salt is sufficient for five hundred plants in a season, although more can be used with safety.—*Ex.*

GROWING HORSERADISH.—Around the city of New York gardeners grow it as a second crop. The ground is plentifully manured and marked off into rows one foot apart. Every alternate row is planted with early cabbages, and after the plants are set out the horseradish sets are planted in the intermediate rows at a distance of eighteen inches apart. If the horseradish starts too soon it is cut off in hoeing the cabbages, which does not injure the horseradish roots in the least. In July the cabbages are harvested and sold, and the ground is left entirely to the horseradish. As the farmer is supposed to produce only one crop from his land each year, he can manage the crop without so much labor. The soil must be deep, so as to allow the roots to penetrate a foot or more, if possible. The sets which are planted consist of the small roots which are taken from the large ones, and are from four to six inches in length.—*Ex.*

Forest Culture.

Destruction of Forests.

THE New York *Times* gives some rather startling facts and figures. The constant and reckless destruction of our forests is fast bringing us to a condition in which there will be occasion for real alarm. It is not probable that any "scare" like that which a few years ago went over England, concerning the prospective exhaustion of her coal supply, will immediately occur in America, touching the loss of our forests; but we wish something near enough approaching it might happen to stop a work that is full of evil promise. In the whole United States there is left but one really great tract of timber. It lies at the far extreme of our country and consists of about one-half of Washington territory Territory and a third of Oregon. California has, perhaps, 500,000 acres of forests now, of which fully one-half has been cut away within the last two or three years. Here in New York our wealth of maple, walnut and hickory is substantially gone, and a large part of it has been wantonly destroyed.

Wisconsin had a magnificent forest growth, but the people are sweeping it away at a rapid rate. One billion feet of timber were cut in a single year. It will not take more than a decade or two at the utmost to fairly exhaust this source of wealth to the State. Michigan and Minnesota are following in the same course, slashing away at their forests as if a tree had no right to lift its head. One of our most intelligent army officers, General Brisbin, who knows the Western country thoroughly, and to whose accurate knowledge, of this subject we are indebted for many facts, says that 50,000 acres of Wisconsin timber are cut annually to supply the Kansas and Nebraska markets alone. The Saginaw forests are even now practically destroyed, and if the Northern Pacific Railway is built, it will open up to the ax the one remaining belt of American timber in Oregon and Washington Territory.

The railroads have been the great destroyers of our forests. They use 160,000,000 of ties annually—that means the leveling of at least 150,000 acres of trees. The timber they use, also, is not the refuse or inferior, but among the very best fine young trees, eight to ten inches in diameter. Fences are also enormous consumers of trees. In the East we are learning in this regard economy from necessity; but in the West, in some States, the farmers cut down the forests with scarcely more thought than they harvest their grain. The fences of the United States, people may not generally know, have cost more than the lands, and are to-day the most valuable property, save railroads and real estate in cities. Illinois alone has $2,000,000 invested in fences, and they cost annually $175,000 for repairs. In Nebraska, where excellent herd laws are in force, the necessity for fences has been so much lessened that the fences of the State cost less in proportion to population than in any other in the Union.

The outrageous waste of timber caused by the felling of forests and the burning of the trees to bring the land under cultivation still goes on at a fearful rate. From 1860 to 1870 no less than 12,000,000 acres of forest were thus wantonly destroyed. For fuel also vast tracts are leveled of their trees. It took 10,000 acres of forest to supply Chicago with fuel one year, 1871. Our annual decrease of forest from all these causes is not far from 8,000,000 acres. Yet we plant only 10,000 acres of new forest a year.

The necessity for a commission of forestry, and the need of efficient laws in all the States for the preservation of our forests, need no further argument than these facts.

EXPERIMENTS UPON ACCLIMATIZATION.—Dr. Gray, in the *Journal of Science* for September, publishes an interesting notice of some experiments recently made by the veteran Swiss botanist, DeCandolle. It has long been noticed that in Spring vegetation in northern climates suddenly pushes out with a vigor not to be seen in warmer regions. It is a question of a good deal of practical interest as bearing upon the problem of acclimatization, whether this was due simply to the immediate influence of climate, or whether the northern plants *have in them* the power to grow with such great rapidity during the early Spring days. Accordingly DeCaudolle planted two lots of seed of the same kind of plants—the one lot gathered from northern, the other from southern Europe. The result of this experiment was as expected, the plants from the northern regions "showing a decided advantage in precocity." To further test the matter, the experimenter procured branches of Poplar, Blue Beech, Tulip tree and Catalpa from extreme southern Europe, and placed them in water along with branches taken from similar Switzerland. All were treated exactly alike, and yet the southern trees were much behind the nothern ones in leafing out. The branches from the northern Poplar tree were *twenty-three days* ahead of those from the south. The Blue Beech and Tulip tree from the north were eighteen days earlier, and the northern Catalpa twenty days earlier than the southern ones. These experiments appear to indicate that slight variations had arisen in these species, and that the same temperature and other conditions do not always produce the same effects, or in other words that the trees themselves possessed a power of more rapid growth in cases of the northern specimens.

VALUE OF TREES IN TOWN.—Mr. Griffiths, the medical officer of health for Sheffield, in his report upon the sanitary condition of that town during 1874, makes the following remarks in reference to street trees: "In the formation of new streets, and on the eve of the contemplated widening and alteration of old ones, it is to be hoped that an effort may be made to provide for trees whenever prabticable. The pleasing appearance of verdure in Summer, and the agreeableness of the shade, are benefits to the inhabitants well worth the effort and the cost. Whoever has visited the boulevards of continental towns, or even the squares of London, can testify to the advantages of verdure as offering pleasure to the eye and gratification to the mind. Moreover, from a sanitary point of view, the benefits are of incalculable value. It has been asserted that the aggregate surface of the leaves of well-grown elm, lime and sycamore trees, with their six to seven million leaves, equal about 200,000 square feet or about five acres; and these are almost constantly absorbing and digesting the carbonic acid and various exhalations given off by the putrefaction of animal and vegetable matter, and, as if grateful for such support, returns into the air pure oxygen, which reinvigorates and renews animal life. Trees thus remove poison from our midst, and to be without them is an oversight. Trees can be had which will exist, with suitable attention, in any part of the city."

Ancient Trees.—In a recent number of the *Illustration Horticole* are some interesting statistics in regard to the longevity of various kinds of trees. The annual concentric circles, so called, on the stumps give one a pretty accurate idea of the ages, although not exactly, for the reason that some trees will form two circles during one year. The table above alluded to is as follows: Judas tree, 300 years; common elm, 335; common ivy, 450; common maple, 516; white birch, 576, orange, 630; evergeen cypress, 800; common olive, 800; walnut, 900; oriental plant or sycamore, 1,000; common lime or linden, 1,100; common fir, 1,200; common oak, 1,500; cedar of lebanon, 2,000; deciduous cypress, 3,000; yew, 3,200. On the Sierra Nevada Mountains of California we have excellent illustrations of the great age which trees can attain. The red wood and what is known as the "big trees" or or *Sequoia* are examples. An accurate count of the annual rings on a stump of one of the past named showed the astonishing age of from 3,000 to 4,000 years. Foreign journals mention a popular tree worth speaking of in this connection. We quote: "Among notable trees," the Peuplier de l'Arquebuse, now standing in the Botanic Garden at Dijon, is worthy of record. This venerable poplar was planted about A. D. 1400, and is consequently now about 470 years old. It is 100 feet high and 40 feet in circumference at its base. The age and dimensions of this tree are quite extraordinary, as the average duration of poplar life seldom exceeds two centuries, and a poplar trunk of even half the dimensions of the above is seldom seen.

Forest-tree planters may well take thought of the great value of the walnut and the tempting prices now paid for its number on account of rapid devastation of surfaces which heretofore yielded largely. Already the wide-awake West is wisely turning attention to this specialty, and before many years we may expect a supply from the cultivated forests of this wood. For some unexplained reason eastern-grown walnut is inferior to that from Ohio, Indiana, Kentucky, probably on account of its more rapid growth in the latter States.

The pecan is one of the finest shade trees that grows. It will grow on any alluvial land. As timber, the pecan is next to the hickory in strength, and far superior in lightness. The wood of the pecan tree makes finer pick handles, ax handles, whipstocks, and all that sort of thing than any other tree. In planting the pecan, nuts should be obtained from the western part of Texas. There the fruit of the tree is much larger than any grown along the banks of the Mississippi. The Texas variety of the nut reproduces itself, always giving a large, sweet nut. The pecan tree is worthy the attention of all who own land in this State.—*Ex.*

Young tree seedlings should be shaded as soon as up, taking care to use some kind of shelter that will allow a free circulation of air around the plants; a screen of lath is much used by nurserymen.

If rats enter the cellar, a little powdered potash thrown into their holes, or mixed with meal and scattered in their runways, never fails to drive them off.

If a mouse makes an entrance into any part of your dwelling, saturate rag with cayenne pepper in solution and stuff it in the hole, which can then be repaired with either wood or mortar.

Porcine.

The Food of Swine.

Hogs are too often looked upon and treated as a very filthy animal. They can be made filthy by filthy feeding and treatment, or be kept healthy and clean by giving clean feed and drink, and keeping in a clean place. We clip from the Detroit *Tribune* some facts on this subject that we heartily approve:

If there is any one thing in rural practice which needs reforming more than another, it is the matter of raising and feeding swine. From the day they are large enough to eat they are offered all manner of refuse about the place, such as rank weeds, filthy slops, spoiled vegetables and meats, dead fowls, etc. They are allowed to rummage the dung yard and glean the refuse of food in the feces of cattle and horses, on the ground of economy. The quantity of food saved in this way is very insignificant. The objections to keeping swine in this way are so serious, that the reasons in favor of it have no force at all. The origin of trichinosis in swine may be always traced to the consumption of vile stuffs in their food, or to being housed and yarded amid filth and foul air. Every few months the press announce a case of trichinæ in an individual or a whole family, with all the horrible details and sufferings which attend the parasitic attack. Only lately some new cases are reported in the West, which are alarming. We are quite sure that every farmer and every one who feeds and fattens a pig will only need to have their attention called to so important and serious a matter to secure a complete reform in the practice of feeding an animal which will take whatever is offered to it, and will live in the most filthy holes and yards. On the farm the swine should have clover pasture, and for swill only milk and meal or grain; no dish water or meat scraps from the table, as these are sure to putrefy and poison the mass in the barrel or tank. Pure water, with a little meal added, is preferable. Give the scraps from the table to the poultry, while they are fresh. Spoiled meats should never be given to any domestic animal. Large numbers of swine are frequently confined in small quarters, with very little regard to cleanliness or pure air. Of course, some of them will lose appetite, the first sign of the derangement of the organs of nutrition and assimilation. They do not thrive, but they are kept along till slaughtering time, and are dressed and packed among the lot. Such animals are extremely liable to be infested with trichinæ and other parasites; and those who consume them as food expose themselves to sickness, diseases of a lingering nature, and to death in a most horrible form.

Interests, therefore, as dear as health and life require a thorough reform in keeping and feeding swine. Let their food be as pure as that which other animals consume. Let them be kept in clean quarters and have pure air. Let diseased or unthrifty animals be separated from those in health, and we may have no fears of trichinosis among either swine or human beings.

Sugar Beets for Fattening Swine.—Jonathan Talcott gives a statement in the *Boston Cultivator* of an experiment performed on Suffolk pigs where sugar beets were largely employed for fattening. The animal was about a year old, and the feeding on boiled sugar beets, tops and roots, began on the 16th of August and was continued three times a day until the 1st of October, after which ground feed was given, consisting of two parts of corn and one of oats, three times a day, till the animal was slaughtered, the meal being mixed with cold water. The result was, on the 15th of August, when the sugar beet feeding was begun, that the weight was 360 pounds; September 1st, 390 pounds; October 1st, 450 pounds and November 1st, 520 pounds. This is the substance of the statement given, by which we perceive that the increase the last of August, when fed on boiled sugar beets, was at the rate of two pounds per day. This rate of increase on the same food continued through September. When fed on ground corn and oats, made into cold slop, the gain for the next fifty days was less than a pound and a half per day.

Weight of Hogs by Measurement.—The same general rule applies to smaller animals—hogs, sheep, etc.—as to cattle. This is, to take the girth of the hog just behind the shoulder blade, getting the dimensions in feet and inches, and measure the length of the back; multiply these measurements together, which, reduced to feet, gives the square superficial feet; multiply again by the number of pounds allowed to the superficial foot. This depends upon the size of the animal; for animals having a girth of from three to five feet allow fifteen pounds to the superficial foot, and if the girth is less than three feet, allow eleven pounds to the superficial foot. Suppose a pig measures two feet in girth, and two feet along the back; multiply these together gives four square feet, and this multiplied by eleven (pounds to the superficial foot for animals, animals measuring less than three feet in girth) gives forty-four pounds as the weight of the pig.—*Prairee Farmer.*

Breeding Sows.—The best formed sows only should be saved for breeders, and when one such is found and proves to be a good mother, keep her, even for four or five years. From the young sows select only the very best.

Rector.—"Those pigs of yours are in fine condition, Jarvis." Jarvis.—"Yes, sir, they be. Ah, sur, if we was all on us only as fit to die as them are, sur, we'd do."

Pisciculture.

PROGRESS AND PROSPECTS IN FISH CULTURE.

No important industrial art has made more rapid progress within the last half dozen years than fish culture. The readers of the California Agriculturist have kept pretty well posted in this matter, as this department has been made of special interest by giving the most satient information which has come to the editors notice upon this subject. Artificial hatching is reduced to a science; or, in other words, to a practical and positive certainty, and is no longer an experiment, although much improved by recent experimenting tests. Wherever clear ponds of water are found, or streams and rivers run, the water can be supplied with myreades of the most valuable kinds of fish hatched in troughs, and fed in artificial or natural ponds and streams till they are strong enough to take care of themselves in the deeper waters where enemies have to be avoided and a living obtained. We read of rivers, ponds and lakes being stocked with millions of fish by the various Commissioners which different States have appointed for the purposes. Laws are passed for the protection of fish during spawning time; and the public is being instructed in many ways to an appreciation and better understanding of the benefits to be derived from an intelligedt system in all public waters.

What is, perhaps, of equal importance, is a better understanding as to how fish culture can be made successful and profitable on a smaller scale in such ponds or streams as many persons may be able to provide with little expense. We predict that the time is not far distant when fish will be as commonly grown all over the country, in artificial reservois, as pigs and chickens are now in farm yards. Wherever water can be obtained that is clear, and free from deletercous mineral and organic substances, and that can be kept at a degree of temperature suited to fish, life and growth, and that can be supplied with atmospheric oxygen in sufficient quantities to supply the resperation of fishes, and that can be shaded in places to afford shelter from the sun, and from observation, so that the fishes will feed at ease and at home, it seems to us that the essential conditions to health and growth will be complied with.

The matter of food will be found a very important one, but not more difficult to master than the feeding of animals. We believe, from the best information we can gain upon the subject, that a system of ditches will be the most economical form of arranging for fish culture. These can be dug at any width or depth, and run in together in any most convenient and artistic manner, easy to dam at any point or to shade in any place, can be graveled here and there, and be generally arranged so as to be practically just the thing on a small scale for fish of all ages and size. The supply of water must depend upon circumstances. Whether from natural or artificial wells or streams it makes but little difference so long as it is pure enough and is aireated sufficiently, which can be artificially done by wind power at little cost. We shall aim to keep our readers posted upon whatever progress is made in any direction so far as we can glean it, and shall expect such of our friends as feel an interest, and have had experience in the matter, to assist with such facts as they may have acquired.

Fish Culture.—In times past I attempted fish culture, and even before I was able to undertake it I did plead with my people, for the pleasure and profit, to begin the work. There are many who saw my pool during the war. One who, I remember, in 1862, endeavored to find the bottom, and said it was so cold (in August) he could not dive deep. I heard those who saw the relic after the embankment gave way, speak of fish as by the million. The pond had an embankment of some nineteen or twenty feet, with eighteen feet of water at the deepest point, and covered perhaps one to two acres at least. My lots cornered in parts for stock water, and there was so much grass that but little dirt washed in. My overseer and myself caught, with a dip-net, four hundred small perch in 1860 or 1861, and I had a pond drained out that cat-fish, designedly or otherwise, had got into and were destroying the perch. The perch caught and put with others in the new pond did not count. I know from a cistern yea, also one in Vicksburg—that a perch too small for eating did in two years, in one instance in one year, grow to size for table. Fish is cheaper than fowl, cheaper than pork, or beef, or mutton, if fed. All

know the Indians, especially Northern, subsist largely on fish. Fish culture, North and East, is attracting State aid and large expenditures are made. A great many localities in hilly sections can have ponds at the mere cost of embanking carefully between short hills. Even gentle slopes, by digging out and embanking a pond large enough to hold stock water, and grassing all around to keep earth and sediment from injuring water, will afford fish for any family.—*Southern Paper.*

The University of Virginia has had a hatching house erected on its grounds by the Commissioner of Fisheries of that state, and fish culture is to be included in its course of instruction. Mr. Fred Mather, of the U. S. Fish Commission, has been engaged to superintend the work of hatching the salmon and trout this season. Mr. Mather's long experience in fish culture, especially at his Trout Farm in Honeoye Falls, N. Y., renders him amply qualified for the position.—*Ex.*

Ninety-five per cent. of the California salmon lately received at the Westport, Conn., trout ponds have been successfully hatched.

Sheep and Goats.

CLEARING LANDS WITH ANGORAS.

At the risk of wearying our readers upon this subject, we still have something more to say about Angora goats. We have lately had a long talk with Mr. L. J. Burrell, who owns a flock of these animals, and is pasturing his chapparel lands upon the top of the Santa Cruz Mountains. Mr. Burrell says the Angora goat is just the best thing in the world to help clear such lands of undergrowth brush of every kind. Where the brush is once cut down and burned they will eat every sprout that shows itself, and there is no better pasturage for them than chapparél and chimesel clearings. They fatten upon the young shoats of oak, maple, wild cherry, mansanita, buckeye, madrone, willow, wild rose, and all other sorts of brush that make the thickets on these rugged hills. The soil there is the best in the county for heavy vegetable growth, and invaluable for orchard and vineyard when once reclaimed from the rank growth of shrubbery. Mr. Burrell seems much elated at his success with his goats and his progress in clearing his lands. With the exception of having lost some fine animals by California lions, which find a congenial home amidst the mountain thickets and ravines, his success has been all he could ask and even more than he expected, although he was sanguine when he started into the business over a year ago. It was thought by some that the Angoras would not do so well in such a locality as upon open, grassy hills. When the value of these animals for clearing lands, that now have to be grubbed and worked over so laboriously, is better known, doubtless they will be in great demand for this purpose in connection with the profits that can be derived from them, which is of first importance. We learn that the farmers in Oregon, where much of the best land has to be cleared, have found out the value of goats for this purpose, and that already several orders for these animals from Oregon have been filled by California breeders. On its own merits alone, where pasturage has to be supplied, the Angora is a profitable animal to the herdsman; and when they can be profitably employed in clearing lands, hoarding themselves at the same time off the refuse, as it were, and doing better than on grass alone, it is an object worth some consideration, surely.

Foot Rot.—Be so good as to inform me through your valuable paper the best cure for foot rot in sheep. Amongst a stock of cross bred lambs a great many are affected. I have applied butter of antimony, Cuff's powder, tar, etc., but with little effect. Shepherd. When foot rot has been neglected for some weeks and the sheep continue on soft ground, which favors the superabundant growth of degenerate horn, it becomrs confirmed and difficult to cure. The secreting textures persist in pouring out lymph and weak faulty horn, instead of tough, firm protecting covering of the healthy foot. One of the chief difficulties in the way of cure is to restore the secreting parts to a sound state. The first step must be with a strong knife, whilst the hoofs are soft, to carefully cut away all loose unsound horn. Where the hoof is extensively affected, this cannot be done all at once; two or three operations will be necessary. Fungus, bad-smelling growths which appear in most troublesome cases, are got rid of by any strong astringent. Butter of antimony is often used for such purposes, and cautiously handled, answers fairly. Some shepherds use it mixed with about equal parts of impure carbolic acid and diluted with two or three parts of oil. In some districts copper sulphate ointment, made in the proportion of one to four of fatty matter, is in good repute, and is improved by the addition of one part of the antiseptic deodorizing carbolic acid. Such treatment may be varied by dressing of zinc chloride solution of mercury penitrate solution. It will be found that the successful treatment of foot rot depends not so much on the particular dressing employed, as upon careful paring away of faulty horn, examine and doctoring the foot at intervals of two or three days, avoiding strong caustics, and placing the flock on dry, firm ground. Amongst sheep on arable land, foot rot is usually cured quicker than in those on grass.—*North British Agriculturist.*

Danbury Bailey.—You have seen pictures of shepherds with the proverbial crook in their hands. I didn't think a party could be a shepherd without a crook, any more than a man could be a leader of an orchestra without a pair of pants. I was glad that the first man I saw tending sheep carried one of these crooks. I didn't know what a crook was for, but always believed it was a badge of the occupation, whose origin I could not fathom, handed down from century to century since the time when sheep were invented. Imagine my disgust when I saw this shepherd use the sacred crook to capture the straying animals by catching hold of one of their hind legs and tripping them up! The awful truth came upon me like a flash, and I sat down heavily, a broken-hearted man. I had thought it a beautiful emblem, and it proves a hind-leg snatcher! Thus flouted the wind from another sweet vision of youth. I must have more salary, or I'll die, I fear.—*Ex.*

Sheep on a farm yield both wool and mutton. They multiply with great rapidity. They are the best of farm scavengers, "clean a field" as no other class of animals will. They give back to the farm more in proportion to what they take from it than any other animal, and distribute it better with a view to the future fertility of the soil.

Stock Breeder.

Organic Adaptation.

Under this heading Professor Kinley, of the San Jose Institute, has written to the *American Stock Journal.* The subject is an important one for all stock men to consider, and we take pleasure in transferring what he says to our columns:

Traveling over this great stock raising State, I have been frequently impressed with a truth which I think equally applicable to all parts of the Union, viz: In our effort to raise or improve live stock, reference should constantly be had as to the conditions under which it is to be grown. Within the boundaries of the United States is almost every conceivable variety of climate soil and topographic character. Florida and Southern Texas are tropical; the mountain regions of the northeast and northwest are perfectly Arctic; while between these extremes the climate takes endless modifications, shading off into the one or the other, according to position, latitude or prevailing wind currents. We have mountains and valleys, plateaus and lowland plains; we have sterile lands and fertile lands, wet lands and dry lands. The average rainfall on the coast of Alaska is I know not how many score inches, while in some parts of New Mexico and Arizona it seldom rains at all. In other parts of the Union the annual amount of rainfall will be found varying between these extremes. In some parts of the United States the climate is subject to great extremes of heat and cold, while along the Pacific coast there are places where the temperature varies but little the year round. It would be absurd to suppose that all these various conditions are equally adapted to every kind of live stock, or that any one kind would flourish equally well in all. In the wild state the goat chooses the mountain and the buffalo the plain. And any one who has studied the geographical distribution of animals and plants will find that the principle has a very general application. It is not an accident that the lion and the leopard tenant the Torrid Zone and the polar bear the Frigid. Neither is it altogether the art and skill of man that have made the Arabian horse the highest type of the equine race.

What is true of species is also true of varieties. Some varieties of the same species will flourish in *habitats* in which others will perish. But there is an elasticity in the constitution of both animal and plant that will carry it out of its original residence and cause it to flourish under very different conditions. In fitting itself to this change of place there is an organic change of character. If we could gather together the primordial ancestors of the domestic animals and plants, we should find some of them so changed in their progeny that we could hardly recognize them as of the same species. It is doubtless true of domestic animals and plants, that while they have lost something of the rugged strength of the wild type, they have also gained something in that elasticity of constitution which enables them to live and flourish under various climatic and other influences. But while I thus state the principle of adaptation, it must be admitted also, on the other hand, that it is true only within certain limits, beyond which neither animal nor plant can prosper. In the early settlement of Minnesota, the Winters about Minneapolis were too severe for the ordinary apple. But there have been found, and in some cases perhaps grown on the soil, hardy varieties that endure their coldest Winters. One of these, I believe, was imported from Siberia. Doubtless the domestic animals, when removed to colder climates, suffer often from the severity of the Winters; but long years of acclimation develop a hardier race, constitutionally adapted to the new *habitat.* So, animals taken from the mountain to the plain, or from the plain to the mountain, undergo in time corresponding changes. The mountain demands muscle and litheness of limb to enable them to obtain their food from places not easily accessible, and muscle comes. The ox of the plain, developing through generations, becomes agile. Both body and limb lose in weight, bones become smaller and more compact and fat gives place to muscle. But all this implies a corresponding change of organic structure. The animal is still an ox, it is true, but it is no longer an ox of the plain. He has grown in his organization and become modified to his condition. Our domestic sheep came from the mountain, and despite its long years of domestication, it still remembers, through its organs, its original instincts. But the Romney Marsh sheep seems to have forgotten entirely its instinct for the mountain, and takes to the lowland from preference. It is still a sheep, however, but it is not the Argali or the Bighorn. Let it be admitted, as I presume it will be without further argument, that changed conditions demand and effect organic changes.

Improving the Dairy Herd.

Dr. E. L. Sturdevant, of Massachusetts, concerning the need of increasing the milk yield of our dairy cows, notes the low price which has ruled for dairy products, and rightly says that decrease in price must be met by enlarged productiveness in the milk-making machinery, and better use of the food material employed. He says further: How can the dairy farmer increase his production? Clearly by increasing the milk capacity of his animals. Suppose two cows weighing 1,000 pounds, one giving 1,300 quarts of milk, the other 1,800 quarts. Both require, say 30 pounds of hay per day, or its equivalent, of which say eight pounds go to support the vital processes. Under this supposition, four tons of hay will produce, when consumed by one cow, 1,300 quarts, and by the other 1,800 quarts yearly. These figures, 1,300 and 1,800 represent the actual average of common and superior dairies in New York State, and three per cent. of live weight, or thirty pounds of hay or its equivalent, is, according to Pabst, the amount required for a cow in milk, while about eight pounds is required for sustenance only. This leaves the figures as stated. Let us assume the feeding value of this food to be equivalent to $8 per ton, and the average price of milk to be 2½ cents a quart, net, then the average cow will bring a profit of $10.56, while the average superior cow will show a profit of $13. Suppose, however, the cow is a very superior one, and will yield 3,000 quarts, then we have a profit, under our supposition, of $43. This illustration indicates clearly, then, how the farmer can meet the depression in the value of his milk by increasing the productiveness of his cows. The experience of every one who has had any acquaintance with the breeding of cattle testifies to the value of a thoroughbred bull, or, to use a common expression, the grading up a herd toward a thoroughbred. The introduction of thoroughbred dairy bulls into the regions which supply dry cattle would add to the dairy quali-

ties of the stock raised from such a bull with the certainty of a law of nature. For the thoroughbred transmits truly his characteristics, and the more nearly the cattle approach the type of the thoroughbred the more nearly they approach his qualities. Let the dairy farmer, therefore, meet the fall in the price of product by an improvement of the milking quality of his stock. Let him seek this improvement by the use of the thoroughbred. If he desires the Short-horn, let him seek the animal which has departed from the Short-horn type toward the dairy type, and which comes of a milking line of ancestry. If he desires the greatest certainty of improvement, let him seek the Ayrshire bull of a milking strain, for power and functions are allied, and the Ayrshire is moulded, and has been for generations moulded, on the type which has been universally recognized as belonging to the larger milker. The merchant recognizes the fact that the manufacturer who manufactures most cheaply can offer him the goods at the least cost, and that those goods which are bought at the least cost can furnish the most profit in their tine. Let the farmer see the bearings of the same fact, that the quart of milk which is furnished him at the cheapest rate will produce for him the most profit, and the farmer who gets more milk from his food than any of his contemporaries cannot fail to be successful. I will close by asking the question: "Is there any other way of increasing the productiveness or the profitableness of your herds than by changing them into thoroughbreds of the proper character as rapidly as may be, by either the purchase of thoroughbreds, or perhaps still it is to be preferred on a large scale, the introduction of thoroughbred bulls."

Kindness to Farm Animals.—Kindness to animals in every respect is as highly appreciated, apparently, as among the human family; therefore keep the animals in good humor by keeping in good humor yourself. The man who makes a practice of judiciously fondling his stock, in the yard and stable, has a more orderly, good natured stock than he who cannot pass them without venting his spleen by a kick or curse upon some poor, unoffending brute. In the one case the animals are all rejoiced to see him, and are quiet among themselves, seldom crowding each other, except as to show their appreciation for their master and keeper: in the other case they partake of the disposition of the master, are cross, hook and kick each other; and, instead of expressing pleasure at the appearance of the owner, are apt to partake of his disposition, returning his greeting in kind. We were forcibly impressed by this a few days ago when visiting the farm of one of the most prominent and successful breeders of fine stock in our State. We noticed whenever he approached, the animal recognized him with a low whinney of delight, or a kind look, which the master was sure to return by a caress of the hand, or a gentle word. We did not see a single animal while there that would not permit you to come up to it in the open field, neither did we see one poor in flesh. And here we will state, for the benefit of those who treat their stock harshly, that kindness goes far towards making the provender last.—*Rural Sun.*

Oil Cake for Feed.—An English writer to the *Millwright* asks: Why is it that so much of the linseed oil-cake produced in your country, especially in the West and North, is exported to England? It must be that its value as food for cattle and stock of all kinds is not known or is not appreciated by stock feeders of your country. American oil-cake commands $50 to $60 per ton in England, and as the English are the best economists in the world they would not pay more for oil-cake than they would for anything else if it were not the most valuable for feeding purposes, particularly when we consider the extent to which they feed for fattening. Experienced English feeders all say that there best beef is that from cattle fed on oil-cake meal, and it is universally known that the English know how to make and appreciate good beef. Oil-cake meal is equally valuable as food for horses, cows, sheep and hogs. It is the richest food known; it gives a healthy tone to the animal, fattening the lean ones and maintaining the health and vigor of the strong. The great value of oil-cake for cattle food has long been known, yet it is by no means sufficiently appreciated in your country, nor upon the part of very many persons who own or feed stock is it clearly or fully understood.

Care of Young Stock.—Some farmers have advanced the opinion, and even practiced upon it, that to have hardy stock they must be exposed to the weather and stinted in food while young; or, in other words, that a calf or a colt well fed and cared for will be naturally tender, and must be so fed through life to be kept in good condition. This is not so, in the first instance, for stock half kept while young can never recover from injury thus received, and no after care in feeding can make as good an animal as would have been produced by proper treatment in early life. To keep stock profitably, they should always be kept in thriving condition, receiving extra attention while young and growing, especially during the Winter and Spring. Good shelter and plenty to eat and drink are especially necessary at this season of the year to make valuable horses and cattle hereafter.—*Wool Grower.*

The Destruction of Bison on the Plains.—Where, years ago the mammoth herds of bison roamed the plains and were hunted only by the Indians as necessity demanded, now lie the bleaching bones of million of those noble animals sacrificed simply for their hides. For the past two years the work of destruction and annihilation has gone forward, and to-day there is not enough buffaloes to form what was at one time considered a moderate sized herd.

Hay, Grain Etc.

SEASONABLE SUGGESTIONS.

An unusual amount of moisture in the atmosphere and soil, with warm weather, showers, etc., is likely to make the growth of grain very tender, so that it will lodge before its time for ripening, and be predisposed to attack by rust. Many of our most observing and practical farmers find it necessary to either pasture down their grain fields with sheep or cattle, or else to run a mower through them to cut back and check the soft growth. A good, early stock of roots is well enough, and is even an advantage to grain, no matter how good the season may be, but it will not do to allow a tender growth of stalks prematurely. If pastured or mowed to the ground, the fields of grain will start up again in dryer and sunnier weather, with healthy, strong stalks, capable of standing alone and healthy enough to resist the attacks of *fungi*, so destructive and to be dreaded. Of course, we can give no instruction in this matter to experienced farmers in this country, but call attention to it for the benefit of such as may be inexperienced.

Where a field of early sown or volunteer grain shows that it is likely to be choked with weeds and foul stuff, it is better to cut it for hay and to pasture it, than to allow the weeds to rule and ruin. We have known cases where it paid to resow the fields with seed after the grain was several inches high, and cultivate the seed in and the green stuff out by thoroughly working the surface with plow tooth cultivators and harrowing finely. The crop of grain from the last sowing would be clean and as fine as possible.

Where one has a use for hay, as every farmer should have, with good stock to eat it, or where the market for hay is within easy reach by team or railroad, a crop of hay often proves more remunerative than one of grain. We think it advisable to make hay of such portions of grain fields as are likely to lodge badly, or that are foul, at any rate. In the vicinity of San Jose, many fields are sown with wheat yearly for hay. Many farmers when they sow their seed, do not know whether they will make hay or grain, but calculate on being governed by circumstances over which they have no control. If the growth is more favorable for grain, then let it stand; but if it shows too rank a growth for grain, and promises better returns as hay, or if it commences to rust, it is made at once into hay. There are *chances* to be taken in farming in California, but the wise farmer will take advantage, even of chances.

Now is a good time to poison squirrels. Use plenty of strychnine and phosphorus. Probably phosphorus is the best dead-shot, when well prepared, of any poison known, patent poisons not excepted. In boiling water phosphorus will easily dissolve. To six lbs. of brown sugar put two quarts of water, and bring to a boil in an iron kettle; then take from the stove into the open air out of doors, add five sticks of phosphorus and stir till dissolved. Put this into a peck of wheat and stir, mixing flour till it is dry enough to handle conveniently. The rodents will like this prepared wheat, and it will surely kill every one that eats a single kernel. It is not dangerous to handle in this way, except with the bare hands, which in no case should be done. Ground squirrels and underground politicians cost the farmers too much to be allowed their own way in this State much longer.

FLAX CULTURE.

The Coast counties in this State find the culture of flax profitable, simply for the seed, which is contracted for by the oil factory in San Francisco. In the hot interior valleys but little flax is grown. A temperature and degree of moisture in the atmosphere favorable to the growth of oats appears to be also best for flax. We hope to see the time when the fibre will be utilized on this Coast, and flax culture become more general. Mr. Wilson Watson, in the Iowa *State Register*, writes the following facts which are interesting:

In 1873, throughout the world there were over 3,000,000 acres in flax. Russia had 1,600,000 acres and the United States 61,204, or less than half of "Auld Ireland," which had 129,432 acres. Derry, Down and Tyrone, in Ulster, Ireland, had 4,080 more acres in flax than the entire United States. Ireland has 21,000,000 acres of land, while in 1870 the United States had 408,000,000, of which 218,000,000 were unimproved. Flax culture should be in America what it is in Russian and Ireland, an avenue of private and public prosperity.

In 1870 thirty-three states in the Union raised over 27,000,000 pounds of flax, the bulk of which was sacrificed by being deviled into flax "moss," for upholsterers' use in place of hair. Instead of this, had it been properly fixed for manufacture, the United States annual expenditure of $25,000,000 for flax and its manufacture might have been materially reduced. Now this could be easily accomplished through the Flax-puller of Tyler and Decorticator of Lefranc, the newest and finest flax machines in the world.

During the past twenty years the United States expended three hundred and fifty-four million dollars on flax and its manufactures, the bulk of which could and should have been furnished by the United States.

During the past twenty years America more than doubled its wheat exportation to England, while Russia decreased more than one-half. In 1874 (nine months) America sent 58 per cent. of England's entire wheat supplies, or nearly six times more than Russia, which only sent 11 per cent. America also received nearly 7 per cent. more for its wheat than Russia, amply demonstrating the superiority of American over Russian wheat.

Wheat land is best for raising flax. America makes no effort to secure a slice of England's flax and hemp trade, worth nearly $100,000,000 per annum, monopolized by Russia, but annually buys millions of dollars' worth of raw flax of Russia and its manufacturers of England. When will this suicidal importation cease? America excels Russia in wheat; it could also surpass Russia in flax.

Rice Culture in Louisiana.

The following in regard to rice culture we glean from southern exchanges, believing it will be interesting to many of our readers. We expect the time to soon arrive when the culture of rice will become a profitable industry in California upon reclaimed marsh and tide lands:

Before the war almost all the rice grown in the United States was raised on the immense plantations in South Carolina. Special attention being given by the planters in that State to the selection of good seed, and the thorough irrigation and culture of the fields, a superior quality has been produced which brings in the New York market a cent a pound more than the imported Rangoon or Pattna. Immense injury was done to these low lands by the neglect consequent on the war, the dykes being broken down, the system of drainage destroyed and everything allowed to go to rain. So widespread was the destruction that the crop is now not equal to one-fourth of what it was in 1860. It is estimated that the production was about half a million barrels of rice.

Louisiana has entered as a competitor for this trade, with prospects of great success on account of her suitable soil and climate. In the old days of slavery only a small quantity had been raised in the State, amounting to about seven thousand barrels in 1860. Instead of decreasing, like the crop in South Carolina, the production increased during the war, and in 1873 it was nearly ten thousand barrels. Then a great impetus was given to the business, many of the planters turning partially from cotton and sugar to rice planting, and year by year a larger area of land has been given to

this culture, with the most encouraging results. During the last ten years the increase has been more than ten-fold. The crop for 1875–76, just harvested, is reported to be the most abundant ever produced. The area under cultivation was 39,000 acres, or about sixty per cent. more than last year, and the yield is estimated, by competent judges, at 175,000 barrels. The yield would doubtless have been still larger, but for the fact that a large portion of the land under cultivation was for the first time planted with rice and under the management of inexperienced planters. The seed used has been mostly of South Carolina growth, and to this is largely attributed the improved quality of the present crop.

Statement of the Louisiana rice crop for the past twelve years, showing the steady and almost uninterrupted increase from 9,866 barrels in 1864–65 to 175,000 barrels in 1874–75, furnished by Messrs. Dan Talmage's sons:

YEARS.	BARRELS.
1864–65	9,866
1865–66	11,943
1866–67	20,464
1867–68	24,663
1868–69	41,917
1869–70	57,956
1870–71	61,256
1871–72	29,873
1872–73	52,206
1873–74	97,126
1874–75	115,000
1875–76	175,000

The total yield of American rice may be safely estimated at 73,000 tierces and 175,000 barrels. It is a much more profitable crop than either sugar or cotton.

SMOKING IN THE BARN.—"No smoking" ought to be posted in every barn. There is not much difference between having a horse-thief around the stables and a man cleaning off horses with a pipe or cigar in his mouth; and there is no hired man much meaner than the one who, when his employer comes around, slips his pipe into his pocket or holds his hand over it. All such fellows should be paid off and started off. As for the proprietor himself going into the barn with a pipe in his mouth, no complaint can be made; but if his establishment burn up, nobody should cry unless it be his wife and children. Lightning, incendiaries and spontaneous combustion combined do not cause so many barns to be burned as the pipe, and generally at least one good horse goes, too.—*Spirit of the Times.*

DR. LEE, a distinguished agricultural writer and chemist, said, in an address before the New York Agricultural Society: "I regard it as one of the greatest discoveries of this age, that about ninety-seven per cent. of the ingredients which make up the whole substance of wheat, rye, barley, oats, peas and beans, exist in the air in inexhaustible quantities. To transmit these aeriform bodies into the plants above named and into grass and roots at the smallest expense is the object of nearly all your hard work." This was spoken a thirty years ago, and the doctor says that the views then expressed will not now be called in question.

AN English farmer accidentally dropped a grain of wheat among some seeds he was sowing in his garden, and having a curiosity to protect it, gave it every chance to come to perfection. The result was sixty-four heads—forty very large—containing 3,044 counted kernels, not including some picked away by an enterprising hen. He leaves readers to draw their own conclusions, only adding that, as the result of frequent investigation, he never found more than twenty-five ears to one root growing in his fields.

The Horse.

Humanity to Horses.

[The following verses are issued on leaflets for distribution to drivers and others having the care of horses, and on cards for hanging up in stables, by the Society for Prevention of Cruelty to Animals:]

Going up hill, whip me not;
Coming down hill, hurry me not;
On level ground spare me not;
Loose in stable forget me not.

Of hay and corn rob me not;
Of clean water stint me not;
With sponge and water neglect me not;
And of soft, dry bed deprive me not.

Tired or hot, wash me not;
Sick or old, chill me not;
With bit or reins jerk me not;
And when you are angry, strike me not.

FEEDING AND WORKING HORSES.

HORSES that work need an abundance of good feed, should be fed at stated times, and be systematically cared for. The jockey who is training a horse for the race-course knows how essential regularity in feeding is, and is always very particular about the quality of the feed given his training horses. We have seen them pick over the hay by the handful, taking out every defective straw or objectionable weed with the greatest of care; also sifting out the oats and washing clean before giving them to the horses, and always feeding, watering and exercising by the time-piece—this for months, so as to prepare the system to expect feed, and rest, and exercise, at a certain time, and to be prepared and ready for it. Every hard working man who has been regular at his meals for a time knows how his stomach tells him exactly when the hour and minute of meal-time arrives, and how bad he feels if the food his stomach craves is not ready, whatever the cause of irregularity may be. It becomes an essential part of his good nature and comfort to get his meals on time. He can work with a good will if regular in his hours of labor, and endure more without fatigue. His muscles and his stomach are stronger. And while a variety of food is essential, there are certain things that seem equally so at every breakfast, dinner or supper. As it is with a man who labors so it is with the horse in these particulars, only more so, for the horse has no mental diversions or cares to call his mind from his stomach. And when his day's labor is ended it is cruel to ask him to do more if it can be avoided. When we take into consideration the nature and wants of the animals under our charge, and intelligently care for and treat them, we can obtain better work, and keep them in better condition with ease to the animal and satisfaction to the master.

The teamster and farmer are not expected to be as particular as the jockey is about food and exercise, nor is it necessary; but they should work and feed by some rule that can be conveniently conformed to. That rule should be established with reference to the needs of the horse as well as to the nature of the work to be done. We have known many teamsters and some farmers to keep their horses at work all day without anything to eat from morning till night. This is poor policy as well as needless cruelty. A horse can do one-fourth more work if allowed an hour or two to feed at noon. We know this by actual experience at the heaviest kind of teaming and farm work.

One word about hay and grain, for horses. We can never advise hay choppers. They make the hay no easier of mastication or digestion, and when chopped the horse has to eat every description of weed and refuse that it contains. We prefer to let the horse pick over the hay himself and reject whatever he doesn't like, feeding no more at a time, of course, than will be eaten without unnecessary waste. As to the grain, it is economy to have it ground, as it saves a working horse a great deal of labor in mastication. Soaked grain is not so good. It is apt to get sour and act injuriously, or be swallowed down without chewing, doing no good and causing dyspepsia. We have found that a mixture of ground barley, oats and wheat bran, *fed dry*, is the best for a work horse. He can eat it no faster than the natural moisture of the salivial glands prepares it for the stomach, and it will all be thoroughly digested and assimilated by the blood for use in supplying vital strength to the system. A horse will soon learn to eat no more of it than he needs, if given in any quantity, and he will keep healthy and strong, be hearty and full of cheerful life and vigor, and stand up to a good deal of very hard work, under kind and systematic treatment.

About the Mule.

The mule seems to be again coming into favor in England. At a recent show in that country, the prize mule was seventeen hands high and proved to be much stronger than a competing horse of equal size. Another mule exhibited was only twelve and a half hands high, which the previous week had been driven 220 miles in forty-two hours enfering in London the evening of the second day at a gait of ten miles an hour and with no signs of fatigue. These evidences of toughness and endurance seemed to have somewhat astonished John Bull, and he is now discussing the question as to whether the mule will prove as a work animal of greater value than the horse. The farmers of the West and South (in the United States) could easily give him a solution of this question. Let him visit the Blue Grass regions of Kentucky, Tallaway, Saline, Lafayette and other counties in Missouri, any portions of the rich cotton growing districts of the South, and he will there find constant evidence that for good, steady work, healthfulness and economy in keeping, there is no animal to be found which is the equal to the mule. We believe, further, that for constant work either in harness or saddle, "day in day out," the mule is decidely the superior of the horse. The best riding animal we ever owned for both speed and endurance, was a mare mule. She was fully sixteen hands high, was as graceful as a deer in making an action; just wild enough to use constant watchfulness, and if properly confined, in one night's time would paw herself out of almost any stable. But what a luxury it was to ride her! head always up, spirits never flagging, going as freely at the outcome as at the start, it seemed to make no difference to her whether her journey was of an hour or a month! We knew her gaits as well as we know the furniture in our sanctum, and knowing either the distance or time, could tell the other by the six-mile running walk of hers, as well as by the chronometer or mile-post. For long distances, the best traveler we ever rode behind was a mule. We have both in this State and Kentucky, seen mule spans which, hitched to a buggy, for style and speed are hard to excel. Give them good grooming and proper handling, and they will certainly show it, and just as much as a horse. The time has been when mules were the fashionable animals of Europe. Who does not remember the ambling mules ridden by the luxurious churchmen who presided over the monastries and abbeys of England in the days of Friar Tuck and Richard Coeur de Leon? In the reigns of the Bourbons the mule was an equal favorite in France, and was alone considered appropriate to draw the gorgeous carriage of his majesty in its annual journey to Fontainbleau. In Spain, even yet he is petted and caressed and constantly receives the attention he deserves, and the proud hidalgo, the jewelled senorita, and even royalty itself, delight in doing him honor and riding him with rich and costly housings. The day may come, for aught we know, when the mule shall be as popular as the thoroughbred horse now is, and when an equal amount of care and attention will be given to his breeding.—*Journal and Farmer.*

HORSE RACING AT FAIRS.—A correspondent of the *Indiana Farmer* does not accept the opinion so often expressed by horseman that if it was not for racing the Agricultural Societies would fail to take money enough at the gates to pay their running expenses. There are many who really believe that it would be impossible to conduct the fair successfully without the fast ring. They further believe that the encouragement of fast speed in a horse is legitimate work of agricultural societies. Neither of these propositions are true. The fact that the largest number of people are present on the day that the principal racing comes off is cited as evidence that the racing drew them. And to one who has given but little thought to this subject, or has not been behind the curtains and seen how these things are managed, this is a plausible conclusion; but to one who knows how these things are managed, the argument is not as conclusive. While the friends of the fast ring would have the people believe that the fast horses brought the crowd on the day of the racing, they argue differently when it comes to making out the programme. The reasoning then is that the racing must come off on the day when it is almost certain the greatest number of people will be in attendance so that they can have an opportunity of witnessing it. The argument stands in about this shape: The racing is arranged for a particular day, because that will be the most popular day, and the people are there on that day because the racing is to come off on that day. One of the most successful fairs of the Indiana State Board of Agricultural was when no premium was offered on speed alone. Not long since the Ohio State fair was a grand success without any premium exclusively on speed. The New York State fair held last fall realized $40,000 receipts $10,000 more than at any previous fair, yet no premium was given on mere speed. Various county societies have held their fairs without the presence of the fast ring, and, others things being equal, their success has been as great as when their fairs were largely given up to racing and gambling.

DURING the last three months 1,446 horses, 67 donkeys and 5 mules, were killed in Paris for public consumption.

THE cattle melon, as our English cousins call the pumpkin, is grown to perfection in France. This year one was exhibited there weighing 400 pounds.

IF they want to pull 'em back, all the men in the world can't stop 'em.

Poultry Yard.

At Rest.

Now, all clucked home to their feather beds,
Are the velvety chicks of the downy heads.
In the old Dutch style, with the beds ah've,
All under the wings of a hovering love;
With a few clinked in, as plump as wrens,
Around the edge of the ruffled hens.

POULTRY FOR PROFIT.

CONFLICTING advice as to which breed of poultry is the best to keep for profit results in confusing the ideas of a new beginner in the business of poultry raising and egg producing. The persons who make a business of breeding fine fowls and have eggs and birds for sale, are frequently prejudiced in favor of or against some special variety, and there advice is, accordingly, liable to be unreliable. Every few years some particular breed is in fashion, and its popularity causes many to desire it above any other. In one decade it may be the Cochins or Brahmas, and in another the Leghorns, Hamburgs or Polands. Whatever it be, after a short run, some other sort is sure to supercede it. Each kind and variety of fowl has its special peculiarities which adapts it to certain conditions, under which it will do as well or better than any other sort would. Also there are fowls for the table and fowls for egg producing. The best fowl for the table will not be likely to be the best layer, and the abundant layers are not the best for the table. The heavy sorts, which mature early and fatten easily, and are not given to roaving, are the best where fowls are raised for market or for the table, especially if kept in small enclosures. On the other hand, where chickens are bred for eggs, and a wide range is supplied, the lighter and more active breeds, which are the best layers, should be chosen.

Some breeders advise keeping breeds of poultry pure—unmixed with other sorts. Others say that it increases the value of poultry, either as layers or for the table, to mix the breeds. We believe it depends much upon the hardiness of the breeds about that. Where poultry has been bred for years to fine points of any special sort, whether of color or form, regardless of hardy qualities and health, they are likely to become delicate, and in a word, run out, as the white face Black Spanish variety did, for instance. In this case it would be an advantage to them to cross in a little stronger blood from whatever source it might be. The Game Cock, which is bred for strength, health and endurance, is found to be an excellent blood to mix with fine or common fowls. On general principles, other things being equal, the hardiest and healthiest fowls are the best. In fact, they are the best anyhow; but for certain purposes fowls of such breeds as are, or seem to be best adapted to any given conditions, should be selected. The feeding has much to do with health and egg and poultry producing; also keeping them free from vermin, and giving an abundance of pure water and pure air day and night. All sickly hens should be at once removed from the flock. Better kill them at once than allow them to run among the others. Choose the strongest cocks for breeders, and use special efforts to keep your fowls healthy and you will be successful.

FEEDING FOWLS PEPPER.—I witnessed for the first time, at the late Crystal Palace bird show, the results of pepper feeding, and was greatly pleased, as well as surprised at the wonderful improvement in color of the different specimens so treated. I looked upon the treatment as fair and legitimate, and in no way deserving the name of a "trick," which, I am sorry to say, has been applied to it. Such a term of reproach should be reserved for all dishonest interference with the outside of competing birds, such as drawing, trimming or staining feathers. Whatever can be effected through the secreting organs of any bird cannot fairly be termed artificial or unnatural, unless everything be so named which differs from the mode of life and food of the bird in its original state. The object aimed at in the treatment of all domestic animals is an improvement upon their natural or wild state; and in the case of the canary bird, bred in confinement, cayenne pepper, voluntarily eaten, is no more unnatural to it than the egg and cake with which the show birds have been regularly fed for years. The system of moulting birds in close warm cages, feeding them at the same time on more stimulating food than simple seed, has long been recognized as a necessity where depth and richness of color are desired. The new mode of feeding on cayenne pepper is simply an extension of this rule; and whether discovered accidentally or as the result of an experiment, is, in my humble opinion, the greatest improvement in the treatment of our favorites that I have witnessed. If it could be shown that the health of the birds is injured by such food, there would be some grounds for objection on the score of cruelty; but as for all I could learn, such is not the case but rather the contrary. I, for one, hail the discovery with great satisfaction. Depth of color has been the point chiefly aimed at in many varieties of canary, and here it is, beyond the expectation of the oldest fanciers, and permanent or not, according to the continued treatment of the bird. I would, in conclusion, lay down one simple rule, viz: Put whatever you like inside the bird that it willingly takes without injury, but forbid, under the strictest penalties, any interference with the outside.—*Correspondent Poultry Review (England).*

HOW TO PET CANARIES.—Says a writer on canaries: "In this way I answer the question of 'how I had such luck with birds.' Simply by allowing the birds to attend to their own affairs, and by letting them understand that their mistress would not harm them. Also, by accustoming them to plenty of light and air and company, rather than, as commended in books, keeping the cage in a dark room for fear of frightening the birds. Make just half the fuss directed in bird books over the matter, and you will have double the success in raising the birds. Never give them sugar, but all the red pepper they can eat. It is the best thing for them. And if your bird feels hoarse at any time, put a piece of salt pork in the cage and see how the little fellow will enjoy it, and listen for the result. Give him flax-seed once in a while, and if he appears dumpy occasionally, give him a diet of bread and water with red pepper sprinkled in. Open the cage door and give your pets the freedom of the room. Soon they will come at your call and fly to meet you whenever your voice is heard. I had one who came regularly to my desk as I sat writing each day, and disputed, with fluttering wings and open beak, my humble right to the inkstand; and when I had reasoned him out of his mistaken notion, he would perch himself upon my penhaudle (no comfortable proceeding for me), and watch gravely as I wrote. I have also many times discovered him in the act of eating off the corners of my paper, even to the title of my article. Another thought nothing of trotting about on my head and shoulders, and even hopped under my throat to nestle against my chin. He would take his bath as I held the cup in my hand, and coolly dry himself on my head. Another would fly down or up stairs to me whenever I called him. He has welcomed my return by flying down stairs and singing at the top of his voice all the while, until, at last, perched on my shoulder, he would accompany me to my room."

SIGNS OF YOUNG FOWLS.—A young turkey has a smooth black leg; in an old one the legs are rough and reddish. In domestic fowls, the combs and the legs are smooth when the bird is young, and rough when it is old. The bills and the feet of geese are yellow and have few hairs upon them when the bird is young, but they are red if it be old. The feet of a goose are pliable when the bird is fresh killed, aud dry and stiff when it has been some time killed. Geese are called green till they are two or three months old. Ducks should be chosen by the feet, which should be supple, and they should also have a plump and hard breast. The feet of a tame duck are yellowish, those of a wild one reddish. If the rear end of the keel bone of a dressed fowl be elastic, so that you can bend it a trifle, it is a cerfain sign that the bird is not over a year old.

The *Poultry World* recommends cooked meat to be given to fowls generally over raw meat, as more nutritious and as making them less quarrelsome. Fish, it says, are always good as food, and when boiled are picked clean from the bones. Scraps from the chandlers, already cooked, are said to be excellent. It is well known that dogs are quite ferocious at times from being fed on raw meat.

"HAVE you any nice fresh farmer's eggs?" inquired a precise old lady at a grocery store. "No, ma'am," replied the practical clerk, "but we have some very good hen's eggs." She took three to try.

Apiary.

[From the American Bee Journal for January.]

The Southern California Bee Country.

IN the *American Bee Journal* for September, 1875, I noticed a communication over the signature of "G. F. M.," a few of the false statements in which I wish to contradict. I also wish to show up some inconsistencies and contradictions of the communication of "J.," who received a letter from a "prominent Kansas bee-keeper." By way of parenthesis, I will state that G. F. M. is located on one of the prettiest claims in the county of San Diego, just six miles from mine, and it is not a *"desert"* by any means. I am at a loss to understand how a man can state in his letter that a country is a "desert," and in the same letter state the fact that the country is "overrun with swifts, horned toads, snakes, ground squirrels, gophers, rabbits and quails." Query—What do they live on? I always supposed that sheep and cattle had to have grass, etc., to live on, and that thousands of sheep and cattle do live here, and live fat, too.

This G. F. M. cannot, with truth, deny.

Now as to some more of "J.'s" facts: "Some 500 or 600 miles," etc. It is 480 miles by sea from San Francisco to San Diego. I have traveled that whole distance overland on horseback on purpose to see the country. Fifty miles south of San Francisco is San Jose; the plain or valley surrounding which was thought, twenty years ago, by novices like G. F. M., to be a "desert." Now it cannot be bought for less than from $200 to $1,000 per acre, it now being under a high state of cultivation, and covered with vineyards and orchards and fruit of all kinds; and in the Fall of 1868 I saw hundreds of bushels of apples rotting on the ground, there being no market for them. Thirty miles south of San Jose is Gilroy, with a rich farming country surrounding it. Twenty miles south of this is Hollister, with the same. Between Gilroy and Hollister lies Soap Lake, out of which flows the Pajaro river, which "reaches the ocean" all the year round. Thirty miles south of Hollister is the valley of the Salinas river, which, for a portion of the year at least "reaches the ocean" in something besides a "dribble," perhaps(?). "J." knows more about that than I do.

The valley is a *rich* farming country and not a *desert*, "J." to the contrary notwithstanding. Next comes San Luis Obispo, with some more good farming country, the people of which would not thank "J." for publishing their county as a "*desert.*" Next comes Santa Barbara, the same. Then comes Ventura county, with just as good farming land as a man need live on. Next comes Los Angeles, with her thousands of acres of orange, lemon, lime, peach, pear, apricot, plum and prune orchards, as fine as any in the world; also her thousands of acres of vineyards, producing vast quantities of grapes, etc. Not much of a desert! The average corn crop of Los Nietos, Anaheim, Santa Ana and San Bernardino is from 80 to 100 bushels per acre.

When I refer to fruits and harvest fields, I *don't* mean a portion of the State 500 or 600 miles north of where I live, but I mean right here in San Diego county. Yesterday I saw a White Turkey fig tree three years old, without a drop of water put on it since it was set out, and not a thing done to it in the way of cultivation since the first season. This was frozen to the ground the first Winter, and yet I saw on it 113 figs.

Men who plant and sow here, and do it when and how it should be done, get just as good returns for their labor as in any of the Western states, where they are as far from market as we are here. *Good* men get just as good wages and as steady employment here as in any country I ever lived in, and I have lived in Pennsylvania, New York, Ohio, Indiana, Iowa and Missouri, and to-day I would not trade my little 160 acres for the best farm in either of those states, and be compelled to go there and live on it and work it myself, or hire it worked, for that matter. I am a carpenter and get $3.00 and board as the lowest price I work for. The statement that "masons they have no use for, as they don't build brick or stone houses on account of earthquakes," is simply laughable. In San Diego, Los Angeles and San Bernardino there are plenty of brick houses.

It is true that many of the bee men are living without women—"baching it"—but many more are not. The majority of settlers here have wives and families, and more would have if they could get them worth having. Good, marriageable white girls are not very plenty here. G. F. M. has just called in and I read this to him. We had quite a laugh over it. He confessed that he had the blues

when writing his letter, and probably wrote as he felt. He called my attention to a communication from M. M. Baldridge, in the July number of the *American Bee Journal*, in which it was stated that bees in Harbison hives could be bought for $2.50 per colony, etc. John Myers, a resident of Los Angeles, while at my house told me that he was offered a lot of bees for that price in exchange for cows, and made the rest of the statement as I gave it, and I supposed it true. It seems that the case was an exception.

One statement more of G. F. M.'s: "They can't raise a thing here farming," etc. O. Oakes, at Bernardino, raised over 3,000 sacks of wheat and barley and a large quantity of hay, how much I did not enquire. Benus Sikes also raised a large amount, and many others raised grain this year, and lots of grain is being shipped from San Diego this year, and a great deal was shipped away last year. We have no starvation here, nor have we been eaten out by grasshoppers, as they have in Kansas and other Western states. W. J. WHITNEY.

BERNARDINO, Cal.

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AGE OF BIRDS.—The eagle, raven, swan and parrot are each centenarians. An eagle kept in Vienna, died after a confinement of 114 years, and on an old oak in Shelborne, still known as the "raven tree," the same pair of ravens are believed to have lived their residence for a series of more than ninety years. Swans upon the river Thames, about whose ages there can be no mistake, since they are annually nicked by the Vintner's Company, under whose charge they have been for the last five centuries, have been known to survive 150 years and more. The melody of the dying swan is mythological. Upon approach of death the bird quits the water, sits down upon the bank, lays its head upon the ground, expands its wings a trifle and expires, uttering no sound.—*Ex.*

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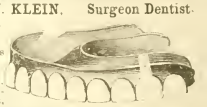

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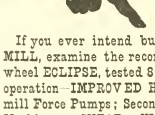

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VOL. 7 CALIFORNIA NO. 3

AGRICULTURIST AND LIVE STOCK JOURNAL

A HOUSEHOLD MAGAZINE.

A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

MARCH.

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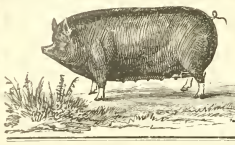

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AND

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Vol. 7--No. 3. | SAN JOSE, CAL., MARCH, 1876. | Subscription Price, $1.50 a Year, Single Copies, 15 Cents.

LETTER FROM ITALY.

BY JAMES S. LIPPINCOTT.

S. Harris Herring, Esq.: While passing through this land of vines we have often been reminded of scenes in the Occident, and many a time have memories of San Jose come up vividly before us. Two weeks at Vevay, near the head of Lake Geneva, in Switzerland, were especially agreeable, the wine harvest being at its hight.

Unlike California in almost every other respect though Switzerland may be, in the abundance and excellence of her grapes, pears and plums, grown upon the hills that border her lakes, she rivals even your young and sunny land. Such an overwhelming abundance of sweet blue plums and Grand Duchess and other pears, I never before witnessed; while the crop of grapes was so vast as to greatly exercise the ingenuity of the proprietors and text the capacity of their vaults, to afford space wherein to bestow the vintage.

Picture to yourself the northern slope of the lake side for twenty-five miles in length, and from one-quarter to one-half a mile wide, covered almost entirely with vineyards, terrace upon terrace, with walls from five to twenty feet in hight, supporting the earth at wide intervals, with here and there a stately homestead, a fine chateau, or ancient tower, while broad-armed walnut trees, or thrifty orchards, or avenues of sycamores are thrown in to diversify the scene. Higher up the slope appear meadows and orchards and compact villages on streets so narrow that carriages can barely pass each other, while before or beside each house stands the ever-present manure heap, reeking with foul vapors and waters. The almost universal presence of this hope of the future, gives a characteristic scent to Switzerland—the smell of the cow yard—which, owing to the manner in which the fertilizing liquid is applied, is a universal nuisance, detracting from the pleasure with which one would otherwise regard many a beautiful scene by positively thrusting itself upon the unwilling attention and filling the sensitive with disgust.

Swiss houses are generally lumbered around with balconies loaded with wood or faggots of vine-trimmings and bean haulm, and almost every one has the under side of the balcony or outside gallery ornamented with festoons of yellow Indian corn hanging in close files from the twisted husks on very long poles, tier upon tier, for the American corn-crib is unknown among them.

Above these dirty villages, each house of which is a picture in itself, sometimes painted by some ardent young village artist in vigorous designs, rise the meadows and the rougher slopes, and soon the groves of pines and firs usurp the soil, which has become very thin; while beyond the precipitous rocks look down in their grey barrenness or thrust their sharp peaks above the lower clouds. Before we left, the early snows had powdered their scalps, and on our departure the highest mountain tops and far down towards their bases were covered with snow, which, in the morning light, added another element of beauty to that which before was lovely; and when the evening glow lighted the summits into phosphorescent brilliance, they became gloriously beautiful with the tints of pale rose and violet, to die into the dun of twilight and the sombre of the evening shades.

The vintage is here *the* industry in which all classes are interested, as upon its prosperity depends much of the wealth of the people. To it they give themselves with an enthusiasm which is quite catching, and we temperance advocates entered into the spirit of the occasion with a zest we were not aware could have been awakened in us.

The city of Vevay, like many other southern cities which have endured the trials of war, has the lower story of its houses, in many instances, constructed in a massive manner, and entered through large arched doorways. This story, though above ground, is heavily vaulted, and serves as a depository for wines and for the mills and presses and scene of manufacturing.

Let me attempt a description of a day at Vevay among the grapes: You must be informed that the Swiss are the most industrious and toilsome of laborers—not even your Chinese can excel them, I imagine. Men, women and children here perform an amount and kind of labor that would be scarcely credible to your easy-going Californians. One may see masons propelling wagons loaded with masses of stone that would make a load for two horses, and which American laborers would not touch with even a hand. Groups of six or eight washerwomen in lively chat may, morning and evening, be seen and heard pushing a vehicle loaded with linen to or from the lake, where the washing is daily enacted, and where the western order of things is reversed; for the washerwoman usurps the place of the soapsuds and clothing, and taking her stand in the tub, punches and slaps the clothes around with a long pole, which she dextrously wields. But the manner in which smaller burdens are carried by the peasants is curious. The Vaudois appear to consider their toilet incomplete unless they are furnished with the *hotte*. This *hotte*, or hod is fitted to their backs, and it is evident that their backs are early fitted to the *hotte*, for groups of children daily appear in the streets upon whose backs this unseemly appendage is strapped, and in which they carry bread, grapes, chips and even their schoolbooks on their way to and from these abounding safeguards of their liberties. This *hotte* is a long, oval basket or light wooden vessel tapering towards its base, and attached to the back by means of straps through which the arms are passed, and affords the most convenient method of carrying burdens in this land of steep declivities.

But to the vintage—that joyous scene, into which so many entered with interest that the schools were adjourned, so that young and old might assist therein. The hillsides, as far as we could see, were alive with grape-gatherers, among whom young women were most numerous, and the streets were thronged with singular vehicles, upon each of which was fastened, lengthwise, a hogshead or pipe loaded with crushed grapes on their way to the mill and adjacent press in the vaults of the city proprietor. The grapes were cut from the vines by means of small, sickle-shaped knives, thrown into baskets and emptied into large wooden hods in the vineyard, where they were smashed by means of a plunger or pestle in the hands of a strong man, who bore the full hod to the gate of the vineyard and emptied it by pouring its contents over his head into a hogshead upon the wagon that bore it down hill to the press. Every vehicle that the city could muster, capable of bearing the burden of a hogshead, seemed brought into service, and a most incongruous assemblage of beasts harnessed thereto, from spavined old steeds to noble teams of draught horses, grand old bulls, well-worn mules, placid cows and the omnipresent, patient and all-enduring donkey.

Our landlord having invited us to visit his vineyard and help ourselves, we accepted with pleasure. We climbed up the steep hillside, wound about between the walls bounding the narrow pathways, and at length found ourselves among a group of grape-gatherers, each busy with her sickle-knife upon the large bunches of sweet amber grapes. We plucked and ate, and though our capacity did not equal that of our host, which he asserted was eight pounds, we left that vineyard glad of heart but heavier than when we entered it. No injurious effects follow a very generous consumption of grapes, and several grape-cures have been opened in this district, where patients are encouraged to consume them in almost unmeasured quantities, morning, noon and night, and with excellent results. We partook abundantly during our two weeks' tarriance at Vevay, and can say that our health has not been better at any time during our travels in Europe.

Florence, Italy, December, 1875.

IN A NUT SHELL.

The people are as completely slaves to a pernicious financial system, in the United States, to-day, as ever were the negroes in the South to their owners. The unjust and outrageous national bank act costs the people thirty millions of dollars every year for individual bank notes not as good as greenbacks! The Government pays interest on money she should have issued herself, without paying interest, and might be drawing interest on as well as not, instead of paying it out as is now the case.

The greenbacks were a mistake in not being made payable for everything instead of excepting "interest on the public debt and duties on imports." Then there would have been no discount necessary.

We believe in paper money, but think it should be issued only by the Government, and paid out by the Government only for value received, or on good security, and should *draw a very small interest*, to cover the necessary expenses of the business, instead of paying interest. The property of each State, county and township, and individual to whom the money might be issued should be held by pledge for the payment of interest and return of money or its value. Such a system would be simple, just, economical and practical. It would give no bankers power to extort enormous rates of interest, would encourage instead of kill industrial enterprises; everyone could be employed in producing, and everyone could secure the comforts and luxurious of life. Money would be a servant instead of a king. The money kings would find their speculative occupations gone, and could become useful citizens, instead of parasites to suck the people's and the nation's blood. Mining stocks and swindles could be dispensed with as worse than useless. The actual wealth and honor of the people only would be at stake, and upon that should be based the circulating medium called money. And the less the actual cost of the medium, the greater the benefit to the people.

MODELS OF HUMANE INVENTIONS WANTED.

The Massachusetts Society for the Prevention of Cruelty to Animals is endeavoring to collect models of every invention for the comfort of animals. The organ of the society, *Our Dumb Animals*, published at the office of the Society, No. 168 Washington street, Boston, thus announces:

In order to show the progress of humane sentiments in regard to the treatment of animals, we propose to introduce into the Centennial Exhibition, models of such inventions as are calculated to relieve animals from suffering.

We therefore request inventors, or owners of such inventions, to send models to our office, on or before the last day of March, with such description as may seem necessary.

These will include horse and ox harness—collars, bits and substitute; bridles, breastplates, horse-shoes, coops, birdhouses, interfering and other pads, whiffletrees, and any other parts of harness or vehicle which contribute to the relief of animals, cattle-cars, calf-racks, in fact, angthing which fitly represents the idea that animals should not be subjected to unnecessary suffering.

These models should be as small as they can be.

Wash for Fruit Trees.—The *Practical Farmer*, speaking of a wash for bodies of fruit trees, recommends the following: One ounce of copperas to eight or ten gallons of water, forms a good wash, and is advised for trial as a preventive against blight. One pound of bleacher's soda and one gallon of water forms a wash that cleans off all insects, and leaves the trees with fresh, young-looking, healthy bark.

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The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

EDITORIAL NOTES.

Every farmer who has cultivated a hill side has experienced more or less trouble by the washing away of fine plowed and cultivated soil, during the season of heavy rains. Mr. Burrell, who owns land in the Santa Cruz mountains, tells us that he does not cultivate his side hills during the rainy season, but allows the grass and weeds to grow until danger of heavy rains is over. The settled soil is held by the roots and *debris* from washing away. Then, in spring, he turns under the green crop, and aims to leave the soil, after cropping, in such condition in the fall as to not wash away during winter.

We lately noticed J. Q. A. Ballou, an experienced orchardist, pruning his fruit trees in such a way as, in our opinion, to greatly lessen their value. The trees were very tall and straight, and he was cutting out the lower limbs and spurs from the inside of the plum and pear trees. The excuse seemed to be that the fruit growing on the lower inside limbs was always inferior. We believe the fault is in allowing so tall a growth, that the fruit grows near the end limbs the best. His system of pruning will cause the trees to produce finest fruit no where else but at the ends of the tall, top limbs. We should, in this case, have shortened in the top *one-fourth to one-third* the distance to the ground, and encouraged a healthy lower growth throughout the head of the tree. The tree would then bear its fruit nearer within reach, be in better proportion, and produce more good fruit than when growing so tall and thin a head. Our object in making this criticism is to bring out the ideas of others. There must be a right way and a wrong way. Of course experience is the best teacher, and the best method must, in the end, produce the best results.

Specie Basis.—The recent attempt to discount silver coin of the United States, on this coast, proves, if it proves anything, that a specie currency is no safer from the machinations of brokers than paper money. In fact, a paper currency properly issued—in the interests of, and backed up by the wealth and honor of the people—would be so stable as to be absolutely beyond the power of any combination of brokers to disturb. The excuse for the present discount on silver is, that it is too abundant. Never since we have been on this coast—now twenty years—has money of all kinds been so hard to command as at the present time. The fact is, our money dealers are determined to tax the industry of the people just as long and in as many ways as they will stand it. The matter is so maneuvered that every cent of discount has to come either directly or indirectly out of industry—a one-sided game, at which the stake-holders win.

A Good Step in the Right Direction.—Rev. Jubez Walker, G. W. C. T. of the Good Templars, Geo. Bramall, G. W. P. of Sons of Temperance, and other leading men have counseled together in the matter of legislation on the liquor question. The result is the following circular and petition, asking that the power to grant or withhold license to retail intoxicants be vested in the supervisors of each county. We hope it will succeed. The lovers of morality and good order can then be heard by way of remonstrance in each or all cases. We hope every town in our county will join all other places in sending on such a petion, numerously signed. This should be done at once. Petitions to be sent to Geo. B. Katzenstein, Sacramento, who will see that they are properly presented in good season:

To the Honorable, the Senate and Assembly of the State of California.

We, the undersigned citizens of the State of California, County of ——, respectfully petition your honorable body to enact a law giving greater protection to ourselves and the State from the abuse of the present system of indiscriminately granting license for the sale of intoxicating liquors by retail, by enacting that the power to grant or withhold license for the sale of intoxicating liquors be placed in the hands of the supervisors of each county, respectively, in the State. And your petitioners ever pray.

This is the age of rings and monopolies. When a thing can no longer stand on its own merits, if there is money in it, an attempt is made to bolster it up and force in some way a respectable recognition and support. The most ridiculous attempt at this sort of game that has for some time come under our notice is that made by the alopathic school of medical practice—the drug doctors. Because there are other schools of practice which discard their drugs; because, as people become more intelligent and better informed upon health subjects the more likely they are to think and choose for themselves, and consequently discard dug medication, which has killed and injured more persons than all other diseases together; because, while free to choose, people will employ such physicians as they believe to practice more in accordance with the laws of health—these alopaths desire to get a law condemning as quacks all persons not holding diplomas from their particular schools, and making such "quackery" a crime punishable by law. We can compare this outrage upon the sense of a free and enlightened people with nothing excepting the old religious intolerances which existed when people began to question the power of churches and priests. We don't expect the matter will result in such bloody wars now as then, but hope these medical bigots, who have martyred millions with their poisonous drugs in the name of science, will be soon placed where they belong—among the fossilized rubbish of the past. Should they succeed in passing such a law as they are now anxious for, their doom would be sealed all the sooner; for, surely, as the people discuss this subject and feel that their own rights, intelligence and liberties are subverted, they will break from such a "practice" and cause even the drug doctors themselves to become converts to a system nearer in accordance with natural hygienic principles.

ORCHARD GRAFTING.

A farmer who says that he followed our advice and directions for grafting last year with splendid success, although he had never grafted a tree before, requests us to repeat the article this year, as it must benefit everyone who has trees that need grafting if they will but give proper heed.

Grafting is a simple process, easy to understand and to do. It is something that every boy should learn how to do, and anyone can be successful with using proper care. There are several methods of grafting and budding, but the same principle, viz., uniting the vital saps under the bark of stalk and scion, is always involved. The only question is the best method of doing the work. Practice has determined this; at any rate, to a conclusion with us. In this article we will give the directions only for grafting standing trees.

For grafting orchard trees we find it much betters to apply the grafting wax liquid than plastic; and in order to do this and have the wax acquire proper consistency and hardness after application, we melt the wax in any vessel that is handy to carry, and apply warm, with a flat brush. The brush should be about one inch wide. We found it most convenient, where we had to use the wax constantly, to have a lamp burning under a vessel near by, where we could replenish the wax we carried in a smaller dish as often as we found necessary. A lard can may be used as a lantern to set the lamp in, and be attached to the bottom of the vessel of wax so as to br handy to carry.

For grafting wax, take half as much bees' wax as resin, and half as much tallow, lard or oil as bees' wax. When to be applied warm, it needs no working other than to be stirred and melted together.

It is better to cut scions some time before grafting especially when the grafting is deferred until late in the season. They can be preserved by healing them into the soil in a shady place. During this month the scions may safely be put in the same day they are cut.

In sawing off large limbs, always saw in on the under side of the limb first, then when you saw from the upper side there is less danger of splitting. We use a sharp, fine saw, and cut off all the limbs on the tree where we wish to graft them.

We use a knife of steel, four inches long on the edge (the cutting side quite concave), with a wedge on the outer end one and a half inches long, to insert in the split while we insert the scion. In large stalks we put in two scions—one on each side of the split—and in very large stalks two splits and four scions.

The scions should be prepared three to six inches long. Cut the wedge end long and straight, leaving the outside of the bevel thicker than the inside, and with a bud, when convenient, as nearly in the center of the outside of the scion as you can, and insert the scion so that the inner bark and saps (libers) come exactly together. Be careful in putting on the wax to cover every part of the wound to exclude the air—even the top of the scion should be touched with wax.

The first year allow all the sprouts and succers to grow, cutting off nothing until next winter. The removing of all the limbs deprives the tree of leaf-producing surface, and it will need all the leaves it can produce on all the sprouts the first year to keep it healthy. Shade the trunk of the tree, either with boards or by winding sacks about it, as the sun will be likely to scald the exposed bark. This is quite important.

We have had good success in grafting in California as early as the last of December, but if scions are properly preserved so as not to swell the buds too much, grafting may be done as late as the last of April, on most soils. On dry soils, early grafting is the best. Stone fruits should be grafted early.

Grafting is something that any person of intelligence and self-confidence can easily do. And anyone with an orchard that does not produce the kinds of fruit desired should not delay, but at once graft the trees, or get some one else to do it, to the best varieties adapted to our climate. For best varieties for a family orchard, see the AGRICULTURIST for December.

RAIN ON THE MOUNTAINS AND IN THE VALLEY.

ED. AGRICULTURIST: We are in the Santa Cruz mountains, about five miles due north from the city of Santa Cruz. The rain-fall here is heavy, as is shown by the following amounts taken from my record, which has been very carefully kept:

No. of Rainy Days.	Inches of Rain.
November.....13	18.56
December.....7	5.85
January.....14	15.58
Total... 34	39.60
Adding amount for Feb. 7 and 8	5.03
	45.02

In the town of Santa Cruz the amount up to the last of January was 27.06—nearly 12 inches less than here in the hills.

The people of your valley, with their meagre amount, often not sufficient for fair crops, can hardly realize how copiously it is poured down upon us "good folks," just out of sight, over the Santa Cruz ridge. As the rain clouds come drifting in from the ocean they encounter these mountains, and are turned upwards into the colder regions, where their vapors condense and fall; thus giving us too much, and your valley not enough. This is, to say the least, a very unneighborly arrangement; and if the cutting down of our forests would, as many predict, send more rain over to your thirsty valley, I, for one, could not object—much as I prize every one of these noble trees. But this old theory is still in dispute among scientific men. In all general storms, when we get the bulk of our rain, the clouds extend from one to five miles high, and it seems scarcely possible that the forests upon the mountain sides have much, if any, influence upon them.

D. M. LOCKE.

Springvale Farm, Santa Cruz, Feb. 9.

The rain fall in San Jose for the season, up to February 12th, the last rain, was 15 inches.

Poetry.

People Will Talk.

We may get through the world, but 'twill be very slow,
If we listen to all that is said as we go,
We'll be worried and fretted, and kept in a stew,
For nodlesome tongues must have something to do,
For people will talk.

If quiet and modest, you'll have it presumed
That your humble position is only assumed;
You're a wolf in sheep's clothing, or else you're a fool,
But don't get excited, keep perfectly cool,
For people will talk.

If generous and noble, they'll vent out their spleen,
You'll hear some loud hints that you're selfish and mean;
If upright and honest, and fair as the day,
They'll call you a rogue, in a sly, sneaking way,
For people will talk.

And then if you show the least boldness of heart,
Or a slight inclination to take your own part,
They will call you an upstart, conceited and vain,
But keep straight ahead, don't stop to explain,
For people will talk.

If threadbare your cost, or old-fashioned your hat,
Some one, of course, will take notice of that,
And hint rather strong that you can't pay your way,
But don't get excited, whatever they say,
For people will talk.

If you dress in the fashion, don't think to escape,
For they criticise then, in a different shape;
You're ahead of your means, or the tailor's not paid;
But mind your own business, there's naught to be made,
For people will talk.

If a fellow but chance to wink at a girl,
How the gossips will talk and their scandal unfurl,
They'll canvass your wants, and talk of your means,
And declare you're engaged to a chit in her teens
For people will talk.

They'll talk me before, but then at your back
Of venom and slander there's never a lack;
How kind and polite in all that they say,
But bitter as gall when you're out of the way,
For people will talk.

The best way to do, is to do as you please,
For your mind, if you have one, will then be at ease;
Of course, you will meet with all sorts of abuse,
But don't think to stop them, it ain't any use,
For people will talk.

Better Than Gold.

Better than gold is a conscience clear,
Though toiling for bread in an humble sphere,
Doubly blest with content and health,
Untired by the lust of cares of wealth.
Lowly living and lofty thought
Adorn and ennoble a poor man's cot—
For man and morals, on nature's plan,
Are the genuine test of a gentleman.

Better than gold is the sweet repose
Of the sons of toil, when their labors close;
Better the child is a poor man's sleep,
And the balm that drops on his slumbers deep.
Bring sleepy draughts to the downy bed,
Where luxury pillows his aching head;
His simpler opiate labor deems
A shorter road to the land of dreams.

Better than gold is a thinking mind,
That in the realm of books can find
A treasure surpassing Australian ore,
And live with the great and good of yore.
A heart that can feel for a neighbor's woe,
And share his joys with a genial glow;
With sympathies large enough to enfold
All men as brothers—is better than gold.

Better than gold is a peaceful home,
Where all the fireside charities come—
The shrine of love and the heaven of life,
Hallowed by mother, or sister, or wife.
However humble the soul may be,
Or tired by sorrow with heaven's decree,
The blessings that never were bought or sold,
And centre there, are better than gold.

An honest old farmer, on being informed the other day that one of his neighbors owned him a grudge, growled out, No matter; he never pays anything.

The Song of 1876.

BY BAYARD TAYLOR.

Waken, voice of the land's devotion!
Spirit of Freedom, awaken all!
Ring, ye shores, to the Song of Ocean,
Rivers, answer, and mountains, call!
The golden day has come;
Let every tongue be dumb,
That sounded its malice, or murmured its fears;
She hath won her story;
She wears her glory;
We crown her the Land of a Hundred Years.

Out of darkness and toil and danger
Into the light of Victory's day,
Help to the weak and home to the stranger,
Freedom to all, she hath held her way.
Now Europe's orphans rest
Upon her mother breast;
The voices of nations are heard in the cheers
That shall cast upon her
New love and honor,
And crown her the Queen of a Hundred Years.

North and South, we are met as brothers;
East and West, we are wedded as one!
Right of each shall secure our mother's;
Child of each is her faithful son!
We give thee heart and hand,
Our glorious native land,
For battle has tried thee and time endears;
We will write thy story,
And keep thy glory
As pure as of old for a Thousand Years.

Advice to Young Men.

BY ANNA LINDEN.

Stand nobly up and face life's work
With brave and honest soul,
And let no false and foolish pride
Your manly heart control.
Stand out in honest, bold relief—
A worker and a man;
Something of use in this great world,
After your Maker's plan.

* * * * * * *

'Tis good to see the honest face
And stalwart, manly frame,
With muscles that bespeak of strength,
And hands to match the same—
Hands that look competent to grasp
And grapple with life's foes,
And cause the barren wilderness
To blossom as the rose.

Ashamed of labor! No, not you,
Since that was God's decree;
For honest and industrious toil
Brings glad prosperity.
It frames and builds up all the good
A nation's life can know—
Science, and art, and fame, and wealth;
From work and effort grow.

Spurn indolence, whose weakening grasp
Blights manliness and worth;
Be something to yourself and friends;

AQUARIUM AND STAND.

Care for All.

BY FREDERICK T. CLARK.

There never has been a life
But has had its share of strife:—
Finding thorns among life's flowers,
Branches in its strongest towers,
Cruel stones around the feet,
And bitterness with all the sweet.

There has never been a heart
But has felt pain's cruel dart
Through its choicest treasures cleave,
Sure and quick, and only leave
Of our fond and clinging trust
Heaps of faded, lifeless dust.

Every life must have its care;
Every heart must have its share
Of the bitterness of earth
To appreciate God's worth.
Through the winter's cruel blight
Come the blossoms, pure and white.

Men consume too much food and too little pure air. They take too much medicine and too little exercise.

Be useful to the earth.
Make labor noble in itself
By being nobly done,
And make fair Nature's heart rejoice
To own you as her son.

Work is most noble, good and grand,
Since God ordained it so;
It keeps the heart from cankering rust
And makes the nation grow.
The workers are the nation's wealth,
And not the idle drones.
Work makes the country prosperous,
Makes happy hearts and homes.

It matters not if hands and brains
Are all your stock of wealth;
With steady, patient industry,
And energy and health,
You yet may rise to lofty hights,
As others have before,
And crown the throne of wealth and fame
With one brave victor more.

DISSOLVED SALT FOR THE TABLE.—The best way to use table salt is said to be to dissolve it in water and keep it in a bottle in a fluid state, using it as you would pepper sauce through a quill in the cork. The Chinese use it in that manner.

The Vineyard.

THE PHYLLOXERA.

We have written nothing about this insect before for the very reason that we knew very little about it. We were aware of the destruction it had caused to grapevines in Europe, and also that its appearance in California had filled viniculturists with much alarm, and that speculation is rife as to the possibilities of its ravages and the methods for exterminating the pest, preventing its spread, etc. We have carefully read everything we could find bearing upon the question.

It seems that these minute insects infest the roots of the grape plant, something as do the woolly aphis the roots of apple trees, only the phylloxera cover the entire bark of the roots as a scale, even to the far-reaching and smallest fibrous roots. This insect injures the vine by feeding upon the juices of the plant which it sucks through the bark. Hence the roots covered with the tenderest bark are preferred by them, and it is impossible to destroy them by the application of any poison that does not reach to the very ends of the roots. This being the case, and it being impracticable to so apply poisons, all efforts to destroy them by poisoning have failed. Immense sums of money have been offered for the discovery of some potent remedy, but without the desired result. However, it has been found that the pest can be drowned by flooding the vineyards for several weeks at a time with water. This process is not injurious to the vines if applied any time during the winter months when the vines are not in leaf. This remedy is probably the only effectual one, and is good enough where water can be so used. Vines growing upon hillsides of course cannot be so flooded, unless it be found that ditches filled with water between the rows and about the vines will answer the same purpose.

It appears that the phylloxera works worse ravages in dry soils than in wet, so that in California it will, unless checked in some way, prove very destructive on all soils that are not occasionally flooded. Persons who contemplate planting vineyards should bear in mind the necessity of selecting ground that can be flooded, or of bringing water upon it for that purpose.

It is said that the phylloxera is indigenous to the United States, and has been known upon the native grapevines in the East for many years, and that the insect is not destructive to the native varieties. Grapes that grow along streams and the banks of ponds, where the roots are below the water level, are not troubled with the pest. It is in just such places that wild grapes grow in the greatest profusion. The following, from the *Ohio Farmer*, is a summing up of about all that is of practical utility as far as is at present known:

Our French correspondent, in his last letter, thus speaks of the phylloxera, its ravages and the remedy proposed:

The importance of the vine-bug or phylloxera question to France may be estimated by the fact that the insect, which covers the roots like a bark, has already destroyed nearly half a million acres of vineyard, and threatens with ruin two millions of acres more. Since three years a government commission has been occupied at Montpelier in experimenting with all suggested remedies on an affected vineyard several acres in extent. It may be safely said that the commission, composed of practical and scientific men, has discovered no cure.

It has, however, demonstrated the happy action of manures in prolonging the life of the vine, though without preserving it. The submersion of the vines, for thirty days at least, with running water in autumn or winter, and the subsequent application of fertilizers—known as the Falcon plan—is the sole efficacious remedy up to the present demonstrated, and so highly is it appreciated that a project is on foot to construct a canal, to be fed from the Rhone, so as to enable several million acres of vineyards to be temporarily inundated. A special commissioner has left for the United States to study a variety of American vine stocks, known in Pennsylvania as the "corn grape," and reported capable of resisting the phylloxera.

VINEYARDS IN CALIFORNIA.

Grape growing in this State can be made a very profitable business, notwithstanding the fact that the so-called "wine-growers" have not made money, and many of them have been obliged to give up everything, after some years of hard work, to foreclosers of mortgages upon the property. Raisin and table grapes have paid well right along; and as the State increases in population and transportation facilities increase, so will the business of shipping fine grapes and making raisins become more and more important and surely remunerative.

We advise the planting of new vineyards of best varieties, and the grafting of the "wine" varieties to table and raisin grapes, instead of tearing up the old vines as some are doing. There is policy in the matter of grafting, as the well established roots will soon make new vines that will bear abundantly of superior fruit. A grape vine produces better fruit after it is a dozen or more years old than when it is younger. The old vines, if cut back and grafted, will, the second or third year after, produce as well as old vines. The maturity and strength imparted to the new top by the well grown roots make grafted vines equal in value to vines of same age as the roots. There is only one difficulty about grafted grapes, and that is the liability of the old stalk that is grafted to send out suckers. If grafted above ground there will be a good deal of trouble to keep those sprouts below the graft from outgrowing the scions. To obviate this, the old vine should be cut off from four to six inches below the surface. Remove the earth from about the vine with a spade and saw the old stalk off as smoothly as possible with a small, fine, hand saw. The root stumps may be split grafted or splice grafted—it makes little difference, so long as the inner bark of the scion and the stump come together to form a union of growth. If the scion is set into the stump so as to touch the vital sap in only two or three places, it is enough to give circulation to the living juices in both stalk and scion. The stronger the cuttings are that are used for scions the better. Slender, weak cuttings are not good for scions. Choose them from the strongest growth of last year's wood. Make the split or cut in the stalk, then wedge the scion to fit and insert it firmly, without bruising the bark on either scion or stalk. One or two buds above ground are enough, and the scions should be shortened so as to admit of not over two buds above ground. Common grafting wax can be used. It is best applied warm with a brush. A vessel holding the wax can be kept over a portable coal stove such as tinkers use. Any one can make one that will answer the purpose out of a joint of stove-pipe. Some persons press the fine earth firmly about the graft and use no wax, and with very good success. The best time to graft grapevines is just as soon as the new leaves get to be about the size of your thumb-nail. Then the vines will not bleed. If grafted before the leaves start the old roots will bleed badly. About the first of April is a good time to graft in many localities. The vines may be grafted earlier, but experience has proved that it is better to graft after the bleeding season is past. The cuttings should be prepared as soon as convenient, and put in a cool shady place out of the wind until time for grafting.

We hope that none of our readers who may have inferior vines will neglect to graft them this season. It will pay to do it. We are willing to admit that the wine business is the poorest paying as well as the most demoralizing business that a poor honest man can venture into. But a good vineyard of useful grapes, for raisins and for the table, is at once respectable and remunerative. The White Muscat of Alexandria is the best raisin grape, though there are other good ones. The White Corinth or Zante Currant grape is bound to prove very valuable also upon this Coast. The business of shipping fine grapes to the Atlantic States will always be a remunerative one. The Flame Tokay, Rose Peru, Black Hamburg and others are good for shipping.

Planting a vineyard in this State is not necessarily a very expensive job. It is not necessary to cultivate the ground any deeper than for a crop of grain. The rows should be laid off six to eight feet apart both ways, and may be struck out, after measuring accurately, with a plow in complete squares, by running straight furrows at right angles. Then in the ditch where the furrows cross plant the cuttings. A long-handled spade, run down the length of the blade, at an angle of forty degrees, will be deep enough to plant the cuttings. Remove the soil enough to insert the cutting and then pack the dirt back closely about it, and it is done. One or two buds above ground are enough. Two men can plant several thousand cutting in a day when everything is ready. The after cultivation should be with harrow and cultivator and hoe, so as to leave the surface soil light and fine and free of all weeds, for the first two years particularly.

This is a very favorable season for planting cuttings, because the soil is so thoroughly filled with moisture, and March and April are good months to them. If you have to plow under a little patch of green grain to make a vineyard, it will not hurt anything but will leave the soil in good condition. Every farmer upon dry land should plant a vineyard for family use, for raisins, and for an investment to pay dividends as a branch of farming.

Sheep and Goats.

A PROGRESSIVE INDUSTRY.

THE Angora goat business, which a few years ago was sneered at by some journals that should have known better, has been brought forward and placed upon a footing that insures for it a grand success and a splendid future.

There was a time when but little mohair was produced here, and there was but little demand for that small quantity. Now the manufacturers are making good bids, in fact there is a wholesome rivalry, which places the product in demand at good figures, and as the supply increases the prices will become better and steadier. The sales of the fleeces for the last two years have proved that, for the mohair alone, it will pay to raise goats. But the mutton is as good, some say better, than that of the sheep, and the pelts are much more valuable for tanning. The common goat skin is little better than the sheep skin, but the Angora skin is fine grained and very strong.

During a late visit to the Angora Robe and Glove Manufacturing Company, in San Jose, we gained several points of information. The workmen can tell by the feel of the tanned skins whether the goats were half, three-fourths or seven-eighths Angora, also by the looks, so striking is the difference. The skin is not so thick and rough—it is fine, soft and tough. We have before mentioned that for strings and belt-lacings they are found to be very excellent, and are being largely used already.

There is about one-half the increase of every flock that are males, and as they are not used for breeding, unless the mohair is very fine, they are killed at from six months to two years old for mutton and pelts. The half and three-fourths breed goat skins are now worth from 40 to 60 cents each for tanning. The finer breed pelts are worth 75 cents to $3 each for making into robes, trimmings, etc. This price will soon advance. The manufacturing company, having only lately started into the business, cannot afford to pay, this year, what they will be able to as soon as the people find out the actual merits of the goods, and there are more pelts to be tanned and make up.

It is estimated that there are now 240,000 grade Angora goats on this coast, but probably 200,000 is nearer the mark. This number will soon increase to one-million, and as they increase in numbers so do they increase in purity, as only pure-breed bucks are used for breeding purposes. Not less than one-fourth of the entire number will have to be slain annually, on an average.

This, it will be seen is to be a great and growing industry. Already the Angora robes and gloves are found to be the prettiest and most useful of any. Some of the finer pelts of kids and full grown wethers, when colored black or some shade of brown, by Mr. Henry T. Welch, resemble the richest furs, and are much admired and prized for rich trimmings to ladies cloaks, etc. As the finer furs are getting scarce all over the world, and continually dearer, these fine Angora kids furs will come more and more into demand at fine prices. And as the buffaloes and foxes and wolves are disappearing, the robes of the beautiful full breed Angoras will not go begging for a market. In fact they are superior to any other robes, and civilization is no loser by substituting the Angora furs for those of the wild and lower animals. Any person who will take the trouble to examine the Angora goods will be satisfied that what we say is even so.

The manufacturing company at San Jose are giving employment to many women and girls in making up their goods. Their machinery for cutting out gloves is quite novel. They have dies made for cutting out gloves, complete in every part, and can cut out dozens at once. But we will not attempt to describe the workings of the manufactory, which is situated on the eastern bank of the Guadalupe, near the San Jose Woolen mills.

The company have lately sent samples of their goods East, and with the most flattering prospects. The only thing we fear is that the demand will soon be so far in advance of the supply that we Californians will not be able to keep enough of the goods at home. From the Green Bay, Wisconsin, *Gazette*, we quote a portion of an article in which mention is made of some goods sent by C. P. Bailey, President of the manufacturing company, and also a breeder of Angoras. Says the *Gazette:*

"Of late years the effort has been made to colonize this valuable quadruped in some parts of this country. It has been tried in South Carolina with some success, but the *strike* seems to have been made in California. Under the auspices of a stock company, some three thousand of these beautiful animals have been induced to graze in the vicinity of San Jose. If it is really the fact that the true Angora goat can be reared on the Pacific coast, we see not why it should not prove a source of wealth beyond mines of gold. Our native furs are growing scarce. The march of civilization is driving back the buffalo, the wolf, the mink, the otter, etc., and but a few years more of "progress" will make furs of any kind a rare and costly luxury. It looks as if Providence was sending these four-footed Angorans from that far land of Turkish barbarism to warm the back of the great Republic during its second century.

"We advise any who have a curiosity about such goods to visit the office of W. C. Bailey, Esq. He has received from his brother, in California, some elegant specimens of this fur, and we understand is very willing to have the public look at them. That very white robe and mat would together constitute a graceful present for your minister or the editor of the *Gazette*, or some other public benefactor."

One mistake we notice in the foregoing. The stock company own no goats, although several of the individual members do. The company is organized for manufacturing, and proposes to confine itself solely to that and the selling of its goods.

We hope the company will make a showing of their goods at the Centennial fair in Philadelphia. They have made no calculation to do so as yet, but the breeders on this coast cannot afford to allow such an opportunity of showing the products of this business to the world to go by without some concerted action. There is not a more important industry on this coast we feel satisfied. The monthly report of the Department of Agriculture for February contains the the following:

"California, in pursuance of a characteristic fashion of doing what cannot be done elsewhere, has not only persisted in keeping considerable flocks of Angora goats, but multiplies their numbers and utilizes the fleece. There have been placed in the museum of this Department some specimens of dressed skin with fleece intact, of divers colors and great beauty, such as are used for fancy robes, rugs, mats, fur gauntlets, and for other purposes. These gloves are very strong, durable, warm and showy. The leather is also used in strings for belt-lacing, and appears from its great strength to be very suitable for such use. This is the work of the Angora Robe and Glove Company, located at San Jose, and demonstrates the availability of Angora products for successful manufacture into articles of comfort and utility. Their gloves, unlike those of buckskin, are dressed with the grain left on. Mr. Frank Leavis, the secretary of the company, is a part owner of a flock of six hundred ewes which were sheared last spring. In one county, Monterey, there are no less than twenty thousand returned by the assessors, and they constitute a portion of the stock of twenty-eight other counties."

Poultry Yard.

Ostrich Farming in Africa.

WITHIN the last dozen years an industry has sprung up in Africa that ought to claim the attention of the people along the Pacific slope of the United States. It is the raising and care of ostriches for their feathers. There are many half-desert like stretches of country here just suited to the habits of the ostrich, and that might probably be put to good use as ostrich pastures, could a ship cargo of those birds be brought here and bred from for that purpose. The article that we select from an exchange almost makes us wish that we owned a fine flock of them, and owned a combined bee and ostrich farm in San Diego county on which to rear them:

Within the last seven or eight years an industry has sprung up at the Cape of Good Hope, which, on account of its novelty and the important results it produces, is worthy of notice. It is that of keeping ostriches in a state of semi-domestication for the sake of their feathers, which have latterly become more and more scarce and consequently more valuable. From the Cape the business of ostrich farming has been introduced in South America, where, as we showed in this journal in 1872, it is carried on with more or less success. But the best feathers are still those produced in the south of Africa.

Like many other important undertakings, ostrich farming, if not actually the the result of an accidental discovery, received a great impetus from an apparently trifling circumstance. A few years ago one of the native traders in ostrich feathers and eggs, having more eggs than he could conveniently carry, left four or five of them in a cupboard adjoining a bakehouse in some Algerian village. On his return about two months afterwards, he was surprised to find the broken shells of his ostrich eggs and a corresponding number of young ostrich chicks. The birds were, of course, dead from want of attention; but the fact was undeniable that the fresh eggs of two months ago, had, under the influence of a high temperature, actually produced fully developed chickens. The circumstances came to the knowledge of an officer in the French army, M. Crepu, who immediately perceived the practical results that might ensue from a careful following up of the hint thus strangely given. He set to work to devise artificial incubators for the purpose of hatching ostrich eggs, while at the same time he procured some pairs of adult birds, with a view to rearing them in a state of semi-domestication.

It is needless here to enter into particulars of the difficulties M. Crepu had to encounter. Suffice it to say that, after many disappointments, he had the satisfaction of finding a live ostrich chick actually hatched in his apparatus, and thus his assidnous efforts were crowned with triumph. About fifty-three or fifty-four days is the full term of incubation, which may be slightly accelerated or retarded by a trifling change in the heat to which the eggs are subjected, although the smallest excess or want of heat beyond a certain limited range is fatal. But to such perfection have artificial incubators now been brought that the whole "sitting" of eggs may be hatched with more certainty than if left to the natural care of the parents.

The baby chick, when it makes its debut, is about the size of a common fowl, and begins to pick up food at once. The nature of the food suitable for both the brood and the adults was a principal difficulty in the first attempts at the artificial breeding of the ostrich; but a careful study of the habits of the birds in a wild state has resulted in the discovery of the best kind of diet suited for the welfare of their domesticated brethren. The principal food given to the young birds is lucerne and thistles and tender herbs and grasses indigenous to the country. Old birds are fed on more matured shrubs and plants, the leaves of which they strip off with their beaks. They are also fed on Indian corn, known at the Cape as "meaties."

It will be interesting to note that when the full number of eggs has been laid, the old birds invariably place one or two of them *outside* the nest—the nest consisting naturally of a hollow scooped out of the sand by the action of the legs and wings of the birds. It has been found that these eggs are reserved as food for the chicks, which, in a natural state, are often reared miles away from a blade of grass or other food. As soon as the chicks emerge from the shell, the parent ostrich breaks one of these eggs and the yolk is eagerly eaten up by the young ones. They are, therefore, both herbivorous and carnivorous; but it is not necessary to gratify their appetite for flesh, as they thrive excellently on the herbs above mentioned. Of course where food is supplied in abundance this precaution on the part of the parent bird of providing meat for their offspring is not necessary, and each egg so left is therefore wasted. Considerable loss also occurs in the number of addled eggs, when they are left to be hatched by the parent birds. It is said that the ostrich is able to discover when an egg becomes addled, and that it immediately ejects it from the nest; thus showing an amount of wisdom which has hardly been attributed to a bird which is popularly supposed to thrust its head into a bush when being hunted, in the vain hope that as it cannot see, it cannot be seen by its pursuer.

These observations were first made in Algeria, but it is at the Cape that they have been turned to practical account, and a very perfect system of ostrich-farming has been established there. Different practices prevail at different establishments. The birds are allowed occasionally to sit; but the success which has attended the use of artificial contrivances is so great that fewer losses occur by this means than under natural circumstances, and the use of incubators is becoming very general. The chicks produced are so healthy as to show that they do not suffer from this mode of treatment.

The arrangement of ostrich farms is similar in all cases. The *desiderata* are plenty of space, suitable soil—that is sand and pasture with facilities for growing the proper food—conveniences for shelter and water. A well conducted farm would require perhaps £3,000 capital to begin in a small way. The industry at the Cape is barely eight years old, and much has to be learned by a beginner. Loss and disappointment are frequently experienced at first; but the occupation is considered a very profitable one, and is certainly healthy and agreeable. Yet nowhere are patience, sagacity and perseverance more necessary than in conducting a good ostrich farm.

A healthy bird of a week old is worth £10; at three months it will be worth £15, and at six months £30 and more. Feathers may be plucked from the ostrich when a year old, and each year's crop will be worth about £7 per bird. At five years the breeder begins to pair his birds, and each pair will yield from eighteen to twenty-four eggs in a season. It is necessary to keep the adult birds in separate paddocks, which are generally surrounded by wire fencing. The ostrich is liable to sudden fits of jealousy. In such a case frequent quarrels would ensue if the birds were all together in one inclosure, with the result, if not of black eyes, at least of damaged feathers, and perhaps broken legs and even death to one of the contestants. The blow from the leg of the ostrich has been computed to be fully equal to the force developed by the kick of a colt seven months old. But whatever be the exact force produced, it is very severe, sufficiently so to break a man's leg.

The ostrich, however, both male and female, is quite an exemplary parent, notwithstanding the popular rumor that, like the crocodile, it leaves its eggs in the sand to be hatched simply by the action of solar heat. Father and mother take it in turn to sit on the eggs, and when the ostrich takes his female companions out for their evening promenade in the desert, one of them always remains by the nest. This fact is sufficient to induce many breeders to leave the eggs to be hatched in the natural way, and merely to devote their energies to the rearing of the young birds and the collection of the feathers.

These are operations that require very great care. Regular supplies of food—about two pounds a day to each adult—are necessary; shelter must be provided for the night and to shield the birds from the violent storms which frequently burst over the southern part of Africa; and there must be supplies of sand and pebbles, which the birds swallow as aids to the digestion. Pepsine is unknown among these birds of the desert, and they introduce a quantity of hard substances into the gizzard to assist them in grinding up their food, just as the dyspeptic featherless biped takes his morning bitters to help the secretion of the gastric juices. It is very amusing to watch the flock of young birds as the attendant enters to scatter their breakfast. The moment he appears with his load of "green meat," the youngsters of the ostrich family trot up to the entrance and caper and dance about in the most grotesque manner, and devour their food with evident relish. They are generally tame and to a certain extent tractable, but as they grow old they sometimes evince a sourness of temper which is anything but encouraging to the formation of a near acquaintance with them.

As the feathers are picked they are sorted according to their quality and purity of color. The pure whites from the wings are called "blends," the next quality "prime whites," "firsts," "seconds," and so on. The tail feathers are not so valuable, and the more irregular the markings of the colored varieties the less valuable they are. "Bloods" will fetch from forty to fifty pounds sterling per pound weight in the wholesale market, and from this price they range as low as five shillings per pound.

The quality of the feathers produced by tame ostriches is fully equal to the best collected from wild birds, while the general average is much higher. Notwithstanding increasing yield, prices are rising instead of falling; indeed, good ostrich feathers are now thrice as dear as they were fifteen years ago. But it is more than probable that as the production increases the price will eventually fall. Even with reduced prices the profits would be sufficiently large to render ostrich farming a very profitable undertaking; and as each year will increase the experience of breeders, the difficulties will be gradually diminished and losses more easily avoided. As it is, this strange industry—the domestication of the wild birds of the desert, once regarded as types of liberty and intractability—is at the same time one of the most interesting and most profitable of the African trader.

A Colony of Ostriches.—Montgomery Queen has purchased 100 African ostriches, and is about colonizing them on his place near Haywards, a small town fifteen miles from San Francisco. It is Mr. Queen's intention to raise ostriches solely for their plumage, each bird yielding over $200 worth of feathers yearly. He has invested $100,000 in the enterprise.—*Denver News.*

Horticulture.

Undeveloped Fruits of America.

A FEW wild fruits may be mentioned which manifestly have great capabilities, that may or may not be developed in the future. The leading instances, in my mind, are the Persimmon and the Papaw; not the true Papaw, of course, which we have in Florida, but the Asia Minor, or Western Papaw so called. Both Persimmons and Papaws are freely offering from spontaneous seedlings, incipient choicer varieties to be selected from both fruit when only a few years old, thereby accelerating the fixation of selected varieties into races; and both give fruits of types wholly distinct from any others we possess of temperate climates. He that has not tasted Kaki has no conception of the capabilities of the Diospyrus genius. The Custard Apples of the West Indies give some idea of what might be made of our Papaw when ameliorated by cultivation and close selection for several generations. I have understood that one of the veteran pomologists of the country, Dr. Kirtland, of Ohio, a good while ago initiated a course of experiments upon the Papaw in this regard; but would be well to know with what success, and if the breeding and selection have been continued through successive generations.

Our American Plums have for many years been in some sort of cultivation and have improved upon the wild forms; but I suppose they have not been systematically attended to. Their exterior liability to black knot and other attacks renders them, for the present, unsuccessful.

Finally, if pomology includes nuts, there is a promising field uncultivated. Our wild chestnuts are sweeter than those of the Old World; it would be well to try whether races might not be developed with the nuts as large as marrons or Spanish chestnuts, and without diminution of flavor. If we were not too easily satisfied with a mere choice between spontaneous hickory nuts, we might have much better and thinner-shelled ones. Varying as they do, excessively in the thickness of the shell and the size and flavor of the kernal, they are inviting your attention, and promising to reward your care. The Peccan is waiting to have the bitter matter between the kernel bred out; the butternuts and black walnuts to have their excess of oil turned into farinaceous and sugary matter, and their shells thinned and smothered by continued good breeding; when they will much surpass the European walnut.—*Prof. Asa Gray.*

About Bananas.—Few people who see bananas hanging in fruit stores think of them as more than a tropical luxury. In fact, they are a staple article of food in some parts of the world; and according to Humboldt, an acre of bananas will produce as much food for man as twenty-five acres of wheat. It is the ease with which bananas are grown that is the great obstacle to civilization in some tropical countries. It is so easy to get a living without work that no effort will be made, and the men become lazy and intolerably shiftless. All that is needed is to stick a cutting into the ground. It will ripen its fruit in twelve to thirteen months without further care, each plant having 75 to 125 bananas, and when that dies down after fruiting, new shoots spring up to take its place. In regions where no frost ever reaches bananas are found in all stages of growth, ripening their fruit every month and every day in the year. Colonel Whitner, near Silver Lake, Florida, has probably the largest banana plantation in the United States, containing fully 10,000 plants in bearing. Some of these are large trees, which do not die after bearing their fruit, but the majority are of the dwarf species, which are renewed every year. Slips are planted about eight feet apart, and rapidly push up leaves, disclosing six or eight small bananas behind this protection. Some plants will have sixteen or twenty leaves and bunches of fruit, bending over as it ripens, forming a most beautiful sight.

The banana is a very tender plant. Says a southern correspondent of the *Prairie Farmer:* "A statement is going the rounds of the papers to the effect that 'the old cotton fields of the South are being planted to bananas.' It is astonishing how much ignorance and misrepresentation have been published in regard to this fruit and the cultivation of it. In my article on the banana, published in the *Prairie Farmer* more than two years ago, I stated (and I repeat it) that to be grown successfully it requires a rich, moist soil and *tropical climate.* These conditions are not found in old cotton fields. The only parts of the United States where it can be grown with success, are the southern parts of California and Florida. It is very susceptible to cold, and even on our gulf coast it seldom matures its fruit without Winter protection, and is not planted as a crop for profit.

Close Planting and Pruning.—We are more and more becoming converted to the practice of close planting and pruning. Take, for instance, black raspberries, or blackberries, grow them close in a row, and like a hedge, by keeping them well cut back as they grow. This makes the branches stiff, so that they do not get down in the dirt, and are easily passed among to pick the fruit, and, too, by mulching the entire surface, the same amount of mulch mulches a much larger number of vines. The roots of all kinds of plants run much farther than most people have any idea of, and simply mulching close around the plant does not answer the purpose. The roots of a plantation of raspberries and blackberries or currants, or even strawberries, run through the entire surface, and hence to be properly benefitted, the surface must be mulched or worked by hoe and cultivator, and the part that most needs this is the extremities of the root. Currants and gooseberries must have a cool, moist place to do well, and if planted on dry soil, this is best secured by a heavy mulching of the entire surface. So, if fruit, and of the best quality, is what is sought for, plant close, prune close, and mulch heavy, is our advice. —*Small Fruit Recorder.*

Orange Culture in Upper California.—From a personal knowledge, derived from a residence in both Los Angeles and Napa counties, we will state that it is our firm belief that Los Angeles as an orange growing county, does not hold a particle of advantage over Napa. We have frost here every Winter, and so do they, and last Winter their orange trees triumphantly passed through, over and above frost, and are now hanging full of golden fruit—a striking illustration of their power of resistance to frost. Comparatively speaking, in a point of fact, the orange trees of Los Angeles demonstrated that they could stand the same amount of frost that grapevines do, without suffering an equal amount of the blighting effect. Now, why not go into the orange business? our market is close and the next best thing is that they frequently pay $1,000 per acre.—*Star.*

[What is true of Napa county is equally true of several other counties, in fact, every agricultural county in the State, in localities below the heavy snow line.—Ed.]

American Tea.—It is said that Georgia is going to try her hand once more at tea growing. Those who have investigated the subject assure us that the obstacles to the culture of tea successfully as an article of commerce in the Southern States are the want of experience and, chiefly, the want of cheap labor. The tea tree of China has been grown by several persons in Georgia, from the Piedmont region to the sea coast. The shrub is a hardy and vigorous evergreen and grows from three to five feet high. It is a neat, compact, laurel-leaved shrub, with pretty, white flowers in Spring and is quite ornamental. It is perfectly hardy and will stand any exposure to the climate, as has been tested in Athens and many other localities in Georgia.

[We believe that Georgia, like California with cotton, tea and silk, will not find tea a profitable plant to cultivate. Whatever requires *cheaper labor* to make it a success in competition with China, we have no present use for, to any great extent, at least.]

The Papaw Tree or Shrub.—The papaw is very common in the Western and Southern States. The fruit is very nutritious and palatable, much resembling the banana. Its introduction here would give us a desirable addition to the number of our fruits. The papaw is pulpy and soft, and probably could not bear long transportation or command an extensive sale in the market, but it would be a very acceptable fruit for home consumption. There are several varieties, some of which grow to the height of ten or fifteen feet, while others are low shrubs. The fruit of all of them is sweet and very fragrant and the product very abundant. The papaw generally grows wild, along the banks of streams, and sometimes forms thickets of several acres.—*Cult.*

In Ceylon large apes are now regularly employed to pull cocoanuts. These animals are imported from Acheen in batches, and marched round the plantations by their owners, who let them out on hire. A line is first attached to these peculiar laborers, and he is then sent up a tree, and is said to select suitable fruit with great discrimination, and to twist the nut round and round till it falls to the ground. Each successive fall of a nut is hailed by the hairy worker with a sort of grim chuckle of satisfaction. » [In California the fruit growers find it cheapor to import Chinamen to gather fruit. Ed.]

Encouraging to Orange-Growers. The cultivation of the orange in Louisiana has of late attracted much attention. One gentleman on Lower Lafourche has an orchard just come into bearing, of 125 acres—said to be the largest in the world. The same gentleman has a tree on his plantation over sixty years old, the fruit of which this year is worth on the ground $100. For several years past the income from this tree has been $50 to $75. The *Co-operative News,* from which we learn these facts, adds that California, Louisiana and Florida are the only parts of the United States in which the orange is now cultivated with success. Its cultivation in South Carolina and Georgia has been abandoned on account of frost. The market for the fruit keeps pace with the increase of production.

Tamarind.—This beautiful tree is a native of the East Indies, but is now considerably cultivated in warm climates elsewhere. Only one species seems to be known—a spreading tree, thirty or forty feet high, with alternate pinnate leaves, which have from twelve to fifteen pairs of small leaflets, and fragrant flowers with three petals, the pods brown and many-seeded, as thick as a man's finger and about six inches long. These pods are filled with a pleasant, acidulous, sweet, reddish-black pulp.

Land Holder.

ANTI LAND MONOPOLY RESOLUTIONS.

Ed. Agriculturist: The following resolutions were adopted at a meeting of the People's Deliberative Association, held at the Estralla school-house, on the 29th of January, 1876:

Whereas, under existing laws, large bodies of agricultural lands have been procured by a few individuals who hold them for speculative purposes; and

Whereas, it is an acknowledged fact that great frauds have been committed to procure titles to land in California under the guise of Mexican grants, swamp and overflowed lands, Sioux scrip, soldiers' bounty warrant, lien warrants, college scrip, and other scrips; and

Waereas, the public journals are the educators of the people; therefore, be it

Resolved, First—That it is apparent that the laws governing land matters have failed to secure the rights of the people; and to say that all that is necessary is a faithful execution of the laws, is but to throw dust in the eyes of the people.

2d—That upon the principle that the Government has the right to grant to individuals or corporations one million acres, it has the right to grant the whole public domain.

3d—That a system of taxation that would force monopolists to sell their lands would be no remedy to these evils. Nothing less than such a change in our laws as would force them to surrender their stolen property to the rightful owners would be adequate to remedying the evil.

4th—That no legislative body has the right to grant any of the public lands to individuals or corporations, excepting to the actual settlers and cultivators.

5th—That, according to American ideas, no man is in the full enjoyment of liberty without a home that he can call his own.

6th That the thousands of our best citizens who are only permitted to till the soil on condition that they pay the rent and please their landlord, are no less slaves than were the negroes in the South to their owners and masters.

7th—That the idea that one man should own large tracts of land to the exclusion of others belongs to the old feudal system, and should not exist in free America.

8th—That it is the duty of the press of this State to show all frauds committed in land matters, by private individuals or public servants, giving the names of all parties therein engaged, that they may be held up to public view, not as enterprising gentlemen, but as public thieves and perjured villains.

W. G. Guppy, Chairman.
John Foltney, Secretary.
Paso Robles, Cal., Feb., 1876.

GOVERNMENT LANDS IN CANADA.

In contrast with the way settlers are generally treated in California, we quote the following from a Canada paper as showing how settlers are encouraged. The Canadians believe that individual prosperity insures the prosperity of the State. They guard the rights of individuals, and no selfish monopolist can defraud the people of their public domain. It is held sacred to actual settlers, as it should be everywhere.

"The conditions of settlement are as follows, according to the latest arrangements: A married man with a family can pre-empt 160 acres, and is allowed to purchase the same amount, to complete the half section, at 50 cents per acre; and all single men or women over 18 years of age can get 160 acres free, but are not allowed to purchase any at any price. The terms of settlement are, to clear on each 160 acres, 15 acres, and build a log house within five years after executing the same."

MAINE STATE LANDS.

There is a large Swedish settlement in Maine upon lands granted in quarter sections to settlers. The State surveyed the lands, laid out the public roads, built school houses, and a log house on each quarter section, also cleared a few acres, as a starter, and required each settler to clear a given number of acres within five years to become free owner. The result of this is, that the State is gainer by a thrifty and increasing population, and taxable property, while the settlers are well-to-do and independent, gaining in wealth, intelligence and comfort each year.

How different this policy from that of California! Here grabbers get all the State lands. Settlers are fenced out of this country, or bled of more money than they can make in ten years, before they can get hold of any. Nature has made a paradise which man has rendered forbidden ground to the deserving.

Federal Land Grants.—The grants of land made to California by the United States are approximated at 7,590,035 acres. Classified—500,000 acres are entered under the head of internal improvements, 1,353,115 as swamp and overflowed lands, 5,229,140 for Thirteenth and Thirty-sixth sections, 46,080 as seminary grant, 6,400 for the erection of public buildings, 150,000 for the benefit of agriculture and the mechanic arts, and 105,000 as salt marsh and tide lands. This makes a territorial area of 2,598,030 acres, or 50 per cent. greater than that of the State of Massachusetts, which State covers but 4,992,000 acres.

Porcine.

The Wild Hog in India.

THE Indian *dookur*, or wild pig, if not so burly as the great mast-fed hogs of Germany, is a fierce and powerful brute, standing over thirty inches at his withers, and wielding tushes which gleam milk-white from his chaps, becoming from six to nine inches long in the well-grown boar. There is nothing in the jungle that he is afraid of, armed with these sharp-edged knives of ivory and clad in almost impenetrable hide. The native shikarris declare that the Deccan boar, when he is thirsty, will "go down to drink at the pool between two tigers, and ask neither for permission," while his temper is quick as his courage is high; for they also say that when the wild elephant comes trampling over the sleeping apartments of his wives and children, the *dookur* will go at the huge intruder and rip at his hocks and flank without a moment's consideration of their disproportion. Over and over again the panther and the pig have been found lying side by side dead in the forest, after an equal contest; for, once committed to any such struggle, the gray boar goes through with it. Not that he has not speed either, in spite of his short legs and heavy carcass. Colonel Shakspeare, a great authority, has just written in his "Wild Sports of India:" "No one but he who has seen it would believe that the wild hog of India can, on his own ground, out-pace at his first burst and run away from the fastest Arab race-horse; but such is the fact. Let the hog be mountain born and bred, —having to travel, in certain seasons of the year, forty or fifty miles every night for his food—then try him on his own hillside, or over the rocky brush of the Deccan, and I will back the hog against the hunter. * * * No man who has not been an eye-witness of the desperate courage of this animal would believe in his utter recklessness of life, or the fierceness that will make him run up the hunter's spear, which has passed through his vitals, until he buries his tusk in the body of the horse, or, it may be, in the leg of the rider." The boars of the plains, however—especially if they get the run of the sugar-canes and garden grounds—quickly lay on fat and become short-winded; but a pahari, or hill pig, who travels for his living, and has to seek it far and wide, does put even a good Arab to his metal over the stones and sun-cracks. He feeds by night, and there is little difficulty in knowing where for the earth will be found turned up in heaps as if a subsoil plow or a gang of railway navvies had been at work. "His snout digs sepulchres where'er he goes," and having eaten his fill of forest roots and berries, his "custom always of an afternoon" is to sleep away the hot light ensconsed in some thicket or close cover of spear-grass and corinda-bush, or perchance in the coolest and dampest part of the jowarree field or cane plantation. Water he must have near at hand, and thus he is constantly found in the woods which border a stream or the slopes of a hill leading down to a lake or pool. In such places the hunt meets, in the early morning or the later hours of the afternoon, with a village full of beaters engaged to rouse up the great swine, whom they hate because he tramples their plantations and roots at their young crops.

"Hog hunting is," says Colonel Campbell, "the most exciting sport in India. As for the pace, there is but one—the very best your horse can muster, he the ground what it may. A lanky, outlying boar can beat a good horse in a spurt of half a mile over the best ground; what, then, must such an animal do over a country covered with loose stones and cut up by ravines? A hog usually selects the worst ground he can find. Going slowly at a boar is very dangerous; for not only may a miss occasion an accident, but, even if you spear him through, he can run up the shaft and rip the horse's entrails out before he has time to turn." And the old boar is considering how to do that as he bounds along, making for the next cover, but aware that two or three of the pursuers are gaining upon him. It is at this juncture racing, steeple-chasing, fox-hunting and fighting—as some one says —are all blended in one; but before it is over the pig will go shares at least in some of the last.

TRICHINOSIS IN THE WEST.—Dr. George Sutton has made a report on trichinosis to the Indiana State Medical Society, in which we find some alarming observations:

From microscopic examination of pork killed in southeastern Indiana, says the report, we have found from three to sixteen per cent. of the hogs affected with trichina, the number of hogs diseased varying greatly in different localities.

That over five millions of hogs are slaughtered and packed in the Western States, not including those which are put up for family use by the farmers; that if four per cent. of the pork is diseased, which we believe to be a low estimate, we have 221,484 diseased hogs put annually upon the market; or, at an average of 200 pounds to the hog, 44,296,800 pounds of diseased meat, every ounce of which, under favorable conditions, is capable of producing disease.

That from the cases of trichinosis that came under our observation, and the *post mortem* examinations, and the effects upon the dog that was fed with the diseased meat, we have come to the conclusion that ninety per cent. of disease produced from eating trichinous pork appears either as gastro-enteritis, or as a diarrhea or dysentery, and not more than ten per cent. as the fully developed form of trichinosis, in which the muscular system becomes affected.

That as diarrhea, dysentery, and enteritis rank high as causes of mortality in the United States, these diseases causing 31,153 deaths in 1870, as shown by the last census reports; and as we have seen that a large amount of trichinous pork, capable of producing these diseases is among the principal articles of food in our country, we thing it more than probable that trichinæ have a much greater influence in the etiology of this class of diseases than has been recognized by the professon.

That it is highly probable that, when the fact becomes more generally known that so large a percentage of pork is swarming with trichinæ, capable of producing disease, it may have an effect upon the use of this meat, and consequently affect the sale, to some extent, of one of the principal articles of commerce in the West."

HOG CHOLERA.—This is a disease which of late years has prevailed to a fearful extent in various portions of the country. Very little is yet known of the cause or the best mode of treatment, although thousands of animals are annually lost by what is said to be hog cholera. But, like many other diseases common among farm stock, there is little doubt that this is the result of improper food or general neglect. In a late number of the *National Live Stock Journal* a correspondent, in speaking of the prevalence of this disease in the Western States, makes the following very pertinent remarks on this point:

The causes of the disease are obscure; but as it is more prevalent in low and undrained localities than on high and well-drained soil, it is considered to be due mainly to miasmatic and mali rious emanations. Confinement in filthy sties, impure drinking water, and a want of change in food, etc., are also among the causes. We are convinced that many animals of this class are annually lost from the effects of improper food, from living in an atmosphere surcharged with poisonous effluvia, the product of animal or vegetable decomposition. Decomposing substances, both animal and vegetable, corn that has undergone a change from long keeping or exposure to damp, and which is loaded, perhaps, with the sporules of poisonous fungi, brine from the meat tub—these and other similar substances are often given to pigs as food, and in many instances have been known to cause very great losses. Much that we have seen convinces us of the necessity of more attention being paid to the quality of the food of these animals than is generally being done and also to the nature of their lodgings, as well as the air they breathe.

This disease doubtless assumes different forms under diffrent circumstances, but the causes are probably the same in all, and might be traced to something radically wrong in the food or general surroundings of the affected animals.

Apiary.

HONEY PRODUCING PLANTS.

IN districts where honey-producing plants are not so abundant as to furnish sufficient feed for bees, and a surplus for honey, bee-keeping can not be made a success unless some such plants as furnish honey are cultivated in such quantities as to supply the want. In the wheat-growing districts bees will nearly starve, unless kept along rivers where there is a good deal of wild pasturage within reach. Mustard is good while it lasts, so are several other plants, as willow blossoms and wild spring clover. But, to be successful, there must be a succession of feed from early till late. Grapes are excellent bee feed. As soon as they are ripe the birds and yellow-jackets break through the skins, and then the bees suck out the sweet juices and make lots of honey. We have known bees to fill several hives from less than half an acre of grapes in a mouth's time. But without the aid of birds, or other insects, the bees could not get through the skins into the concentrated juices and sweets of the fruit. There are several plants indigenous to this coast that are superior honey-producing plants, such as the *mauriuata*, willow, white sage of Southern California, and others.

The following article we quote from the *American Bee Journal*. It will be found instructive and interesting:

"We will first mention those which are a valuable crop, aside from the honey which they produce:

"Buckwheat *(polygonum fagopyrum)* succeeds best on a dry, rich, sandy loam. It is a valuable crop for family use, farm stock, poultry, etc., and will rapidly enrich the soil, if deeply plowed under while in full bloom. Its yield of honey while in bloom, which is of quite short duration, in a favorable season, compares well with any plant with which we are acquainted, but it is of very inferior quality both in taste and color. The seed should be sown in June, broadcast, using three to five pecks per acre.

"Chinese mustard *(Sinapsis Chinensis)* is about as well adapted to the wants of the bee-keeping farmer as any plant can well be. It is well adapted to most soils and does not seem to be affected by atmospheric changes. Prof. J. P. Kirtland says of it in 'Gleanings' (vol. 3, page 18): 'In my belief, the true Chinese mustard holds out the best prospects for this purpose (profitable cultivation) of any plant at present known. * * * It produces more than double the quantity of flowers and seed than either the black or white mustard; the species usually cultivated in this state, the last named, is too frequently sent out from our seed stores as the Chinese. If patches of ground be sown at suitable intervals of time from early Spring till near the close of Summer, our bees will be constantly occupied in collecting honey during those periods when they are usually idle for the want of such supplies as will be thus furnished. The seed of this kind is peculiarly adapted for grinding into the popular condiment, always commands a ready sale and good price, and will insure sufficient income to repay for its cultivation.'

"It is highly prized, when young, as a salad, or as greens; the seed is also eaten by poultry. The honey which it produces is of a very beautiful light yellow color, is of fine flavor, and always commands the highest market price.

"Common mustard *(Sinapsis Nigra)*, is a valuable bee plant, cultivated to some extent for its seed; but it is a bad weed.

"Rape *(Brassica Napus Oleifera*, Fr. *Colza*, Ger. *Raps)* is an important plant both as a bee plant and field crop, and is so well known that no description from us is needed.

"Sunflower *(Helianthus)* has deservedly received much attention during the past few years, for indeed it is as useful a crop as a farmer can raise, the leaves producing an enormous quantity of nutritious forage for stock, and the seeds are eagerly devoured by all kinds of poultry, hogs, etc. They also have a real commercial value, being used in the manufacture of vegetable oil. It yields a large amount of beautiful, yellow honey.

"Lucerne or French clover (alfalfa) *(Medicago sativa)* is one of the best kinds for sandy soil. It is notable for its long tap roots, which penetrate the soil to a great depth, rendering it capable of withstanding a severe drought, and causing a prodigous growth of fine food for stock. As a bee plant it is nearly equal to Alsike clover.

"Italian or scarlet treefoil *(T. incarnatum)*. Introduced from Italy, where it is extensively grown, as also in France, is a profitable crop. Its flowers are produced in long heads of bright scarlet and are sought for by the bees from morning till night. We recommend this variety for trial to our brother bee-keepers. For a crop it should be sown the same as Alsike clover, for soiling during Summer, using from 6 to 10 lbs per acre.

"Yellow treefoil clover *(Medicago Lupulina)* is very prolific and perfectly hardy. It grows very rank and produces honey during our severest droughts. Sow in Spring 7 lbs per acre.

"Esparcette or sanfoin *(Hedysarum Onobrychis)*. This plant is an acquisition alike to the stock-raiser and the bee-keeper, and though usually classed with

the clovers, it is a leguminous plant. Its roots, which are large, hard and woody, remain in full vigor for a great number of years, thus producing annually an enormous quantity of fine honey and forage. It is particularly recommended for feeding milch cows, sheep, etc.

"Vetches or tares (*Vicia sativa*). This species of the pea is grown extensively in Canada and England, where it is highly prized for green fodder, soiling, pasturage, or as hay, being relished by all kinds of domestic stock. Its flowers are beautifully variegated, and are a favorite resort for the busy little bees. Sow broadcast, using about one bushel of seed for an acre of ground, or it may be sown in drills the same as field peas.

"Borage (*Borago Officinalis*, Ger. *Surkenkraut*), though it may not be fully entitled to be cultivated as a field crop alone, yet it certainly deserves a place in every garden. In Europe, it is considered a valuable vegetable, and is to be found in almost every garden. The value of borage is thus spoken of in the *English Mechanic*: 'The large leaves and tender stalks dipped in butter and fried make an excellent and savory dish. The brilliant blue flowers are very pretty as a garnish for salads. * * The young leaves boiled are a good substitute for spinach. * * * Bees are extremely fond of borage and it appears to repay them well for their attention.'

"Mignonette, Parson's new white (*Reseda Odorata Eximia*). Too much cannot well be said of the value of this beautiful plant to those who are raising but a few stocks of bees. Kidder speaks thus of the value of mignonette in his 'Secrets of Bee-Keeping,' page 59: 'If cultivated to the extent that it might or ought to be, it would certainly furnish a rich pasturage for bees; it blooms from June until the autumnal frost. A small patch of this will perfume the air for quite a distance; and were it cultivated by acres, for bee pasturage alone, we should be favored with a fragrant atmosphere that would vie with the spicy breezes of Ceylon, and a honey that would outdo the famed honey of Hymettus for aromatic flavor.'

"It blossoms in the latter part of June and continues in bloom until cold weather (heavy frosts do not injure it), and indeed we are informed by our Southern friends that with them it continues in full bloom during the Winter. There are many other new varieties, but we think they are inferior for field culture, as is also the common dwarf sort (*Reseda Odorata*). The seeds, which are small, should be sown in the Spring, sowing thinly and covering lightly, in drills at least three feet apart.

"Alyssum or rock madwort (*stelnkraut*) is of but little value, except as early bee pasturage. The dandelion furnishes a rich pasturage for bees very early in the Spring. Scatter the seed in your pastures; it will do no harm, as all kinds of domestic stock will eat it, and in a year or two you will have a rich feast for your bees.

"Yellow and white Bokhara clover (*Melilotus leucantha and M. alba officinalis*) are most excellent honey-producing plants, but they are a great nuisance to growing crops, and should not be allowed to spread too much where they are not desired. However, they are well adapted for sowing on barren hills, steep hillsides and broken ground generally, where it is not desirable for cultivating grain.

"Catnip (*Nepeta Cataria*) and motherwort (*Leonurus Cardiaca*). Bee-keepers should not cut down nor destroy these plants, but increase their number, as being the very best honey-producing plants that can be grown. It is a good plan to scatter the seed in stone piles, along fences and other waste places about the farm. It is not a bad weed.

"*Monarda punctata* is valuable for bees but it is difficult to grow it except on sandy or gravelly land.

Patridge pea and Rocky Mountain bee plant we have not tested sufficiently to recommend.

"Basswood or linden (*Tilia Americana*) and tulip, whitewood or poplar (*Liriodendron Tulhpifera*) are worthy alone for cultivation, either for their timber or as an ornamental shade tree. They are rapid and thrifty growers, easily transplanted, and will live for hundreds of years, and are the most valuable monument that a man can build for future generations. Were our public roads, parks, dwellings, etc., planted with these trees, what a boon it would be to all engaged in this interesting pursuit. A good way to introduce them in a neighborhood is to furnish your neighbors the desired quantity on condition that if they grow them successfully they have them free; but if they neglect them and let them die they to pay you cost price. The seeds are to be sown in drills, and cultivated one year, then transplanted, setting from 8 to 14 feet apart each way. The seed will also grow if strewn among timber, along fences, etc.

"The Wild China is also a good honey-yielding tree, nearly or quite equal to the above; but we do not think it will stand our severe Winters."

Bees in Los Angeles County.—Myself and companion have an apiary consisting of 150 colonies of bees, in Los Angeles county, California, 18 miles east of Santa Ana, and 12 miles north of San Juan, in the foot-hills of the coast range of mountains. My partner located here in the Fall of 1873, at which time it was the only apiary in this section. Although his bees were in the old-fashioned box hives, he had excellent success, owing no doubt to the superiority of range and mildness of climate.

Others hearing of his success have concluded to try their luck in the bee business, in the same locality. We have 12 or 14 families located here who are establishing apiaries, having waited for the return of cool weather so they may remove their bees in safety from the valley. We have succeeded in transferring 150 colonies from the old box hives to the Langstroth, without the loss of a single one, although by some accident we lost four or five queens; but they were soon replaced by inserting a frame of larvæ into the queenless hive. In transferring we took 13,000 pounds of first-class strained honey. My partner had taken 7,000 pounds before transferring, making in all 20,000 pounds from 150 colonies in the old box hive. We expect to have at least 200 colonies with which to commence operating in the Spring.—*S. P. H., in Am. Bee Journal.*

In the construction of the San Lorenzo Flume, thirty-four tons of nails were used. The flume is eleven and three-fourths miles in length, and absorbed 1,900,000 feet of lumber in its construction.

According to English papers the foot and mouth disease is still raging almost unabated in that country. It is also spreading among the shepherds' dogs in Yorkshire; the dogs probably catching it from the flocks they tend.

Chicago, the largest grain market in the world, handles 90,000,000 bushels annually, and has now in operation eighteen steam elevators, with a capacity of 15,350,000 bushels.

Capital and Labor.

Song of Progress.

WHAT! shall the future fate of man
Be likened to the past;
And disregard of human rights
Continue to the last?
Shall power, ambition, and deceit
Still warp, and crush, and bind
The mind, and body, dark'ning still
The future of mankind?

Shall Ignorance, in fetters dire,
The masses still enslave;
And Bigotry, in bitter ire,
Its dreary dogmas rave?
Shall wealth and wretchedness for aye
Their glaring contrast find:
And crime and creeds be rife through all
The future of mankind?

Shall Toil produce, but ne'er partake,
Complain, but yet endure?
Is there no physic for the ill,
No remedy to cure?
Yes, there's a problem might be solved
Freedom's ancient to find,
For in the present is involved
The future of mankind.

The task to learn, the part to take,
The duty to discharge,
The obstacle to overthrow,
Advantage to enlarge:
Justice, and Truth, the cynosure
To guide the earnest mind;
The present earnest helper works
The future of mankind.

—[Histrion.

A CRANGER'S IDEA ON THE QUESTION.

BY A. G. S.

WE know the universal antagonism of labor and capital, which explains all labor strikes elsewhere. Wise, or otherwise, they will continue, in the nature of things, until justice and unity shall harmonize the conflicting relations of men and classes, employers and employees. Labor can never be yielded or relinquished, since life itself is only sustained by labor. Labor itself is always the workingman's capital, which should stand forever united and independent, against all monopoly of kings and lords.

The negro chattel had rights, founded in human nature. The rebellion was most terribly bloody, to be sure, but the last resort. Mankind is slow to learn.

The Knights of Agriculture and the Grange are now grand and extensive. We avoid the blood, but claim justice and equal rights for the farmers and producers. Parties and sects are ignored. It is a question of manhood and labor against non-labor and money aristocracy. We inaugurate a new order of aristocracy, namely, the aristocracy of labor.

Man is man, and who is more? Come down to the bushel. Never so big or high, or whatever your rank, station, or title, you all have to eat the same bread with us, and we *produce* it. It is common sense, common labor, common right, common humanity. We want no privileged class of any kind, because the farmer claims equal manhood, and such partiality degrades and crushes him down in the dust. Why so many professional brains, if the common class are endowed with that needed quality? Look at it, and abolish such nonsense. You may boast of your famous lawyers, but the essence of all law even the seedy and swarthy farmer can well understand, and save the fees, through arbitration, though his carefully studied and classical speech be not reported in the morning papers. The substance of all true, practical, common sense religion the plainest and roughest workmen may fully comprehend, without making any man an idol. Such gilt-edged, false distinction ruins the best society, like the old caste system of India. Then your M. D.s spread round thick and stylish; but does not the extra professional dosing largely increase the general poverty? Would it not be wealth to the working class if they would take care of their own health? Even so, evidently.

All superfluous offices, legislation, and burdens of old custom or habit in the past, we would throw off and abolish, because thereby labor is taxed, shackled and crushed. We would strike in various ways: by speech, oral or written, by the newspaper, and by the ballot. Pity a vast majority of editors are so devoid of brain force and moral back-bone. Never fear to speak the bold and saving truth, for speech is our greatest weapon and power. Speak, sing, write, print, the burning and blistering truth. "He that would be free, himself must strike the blow." We may make a bloody strike, but there are wiser methods. Ballots are better than bullets. But the best strike of all is co-operation. Strike for manhood, honor, truth and right; with the plow, the hoe, the spade, the ax, the scythe, the hand, the foot. Strike down tyranny and monopoly. Strike up brotherhood and equality. Strike the saloons, the loafers, the dandies, the politicians, the dead-heads, the aristocrats. Strike for the good time coming—the millennium.

The Grange movement is national, not sectional; and, therefore, when women vote in Minnesota and Texas, they will do the same in California. Millions of Grangers and Sovereigns will be millions for woman's ballot. Then keep it before the people. East, west, north and south—the cause is one everywhere.

Government with us is a multiplicity, a combination, a complication; a mixed, cunning, confused and intricate web, with the people for warp and woof, and self-weaving; a nice, curious, beautiful, harmonious, perfect system! Really, all right for the millennium—only wipe out clean the monstrous and diabolical abuses and abominations, and all those ambitious ones who stand outside, a peg or two above the working class, to boss, assume, grab and monopolize the whole grand job, and lay on the big taxes. We must mark and correct the foul, black proof-sheet, and pick out the knotty and tangled threads, and kill monopoly stone dead.

LABOR.

BY MRS. L. H. GUNN.

Ever since the decree that man should "eat bread in the sweat of his face," labor has been considered a curse, a degrading punishment for the sins of our first parents. From the stately Roman of ancient times, down to the men and women of the present age, we find the idea firmly fixed in a certain class of minds that work is low, disgraceful, tending to make us mere animals, blunting our moral nature rather than elevating us. An essayist says "things affect the mind accordingly as we put them;" thus it is with labor, if we put it as drudgery, it becomes so, and ceases to be a blessing; and so, considering the means without the end, nothing that we have of ourselves in this life, is a blessing, for everything that is worth having is the price of labor, and the better, the more valuable a thing is, the harder the work for its attainment. Iron is heaped in mountain piles, and, comparatively speaking, is obtained with slight labor; while gold-flakes are the fruits of hard, incessant toil. Fishes, in countless numbers, are found almost upon the surface of the water; but pearls come only

by the severe work of the pale diver. The elements of learning are within the reach of all, and obtained by very little effort; but the higher attainments of art and science are the result of labor and industry only. If a person wishes a high moral character, he must work. Good thoughts and noble deeds never come by idleness.

I do not mean by work, necessarily manual labor. A man may work just as hard, and even more severely, with the brain than with the hands alone. If one would write a good book, it is only by years of labor that he can hope to succeed. If he would be an artist, a musician, it is only after a long time of toil that he wins success. Think you that Raphael painted his glorious pictures, or that Shakspeare wrote his wonderful tragedies and comedies without labor. In history do we find one instance where a great advance in improvement and civilization has been made but by toil, sacrifice and bloodshed?

Now, if all things noble and beautiful, if every step in the road to success is the price of labor, can work be called a curse, a punishment? No! a thousand times, No! It is one of the blessings given to man. Go to heathen lands, where man lives almost without labor, see him in his degradation and filth, and then question, if you can, the wisdom of an all-wise Creator in requiring man to work for his maintenance. Work is, in reality, rest—rest from the sorrows, the petty vexations, the temptations to evil which are caused by, or more felt in idleness—for, are not those days in which we lounge about with no particular aim the most unhappy? Finally, let us work.

Work for some good—be it ever so slowly;
Cherish some flower—be it ever so lowly;
Labor—all labor is noble and holy.

Educational.

Unity.

Thought is deeper than all speech,
Feeling deeper than all thought;
Souls to souls can never teach
What unto themselves was taught.
Like the stars that gem the sky,
Far apart, though seeming near,
In our light we scattered lie;
All is thus but starlight here.
Only when the sun of love
Melts the scattered stars of thought,
Only when we live above
What the dim-eyed world hath sought,
Only when our souls are fed
By the food on which gave them birth,
And by inspiration led,
Which they never drew from earth,
We, like parted drops of rain,
Swelling till they melt and run,
Shall be all absorbed again,
Melting, flowing into one.

—[C. P. Crauch.

A Lesson.

Last night I weighed, quite wearied out,
The question that perplexes still;
And that sad spirit we call doubt
Made the good nought beside the ill.

This morning, when, with rested mind,
I try again the self-same theme,
The whole is altered, and I find
The balance turned, the good supreme.

A little sleep, a brief night's rest,
Has changed the look of all that is!
Sure any creed I hold at best
Needs humble holding after this.

—[Chamber's Journal.

"That."

In the following lines the word THAT is used to exemplify its various significations:

Now, that is a word which may often be joined,
For that that may be doubled is clear to the mind;
And that that that is right is as plain to the view
As that that that we use is rightly used too;
And that that that that line has is right,
In accordance with grammar, is plain in our sight.

SUCCESS REWARDS MERIT.

BY ECONOMY.

THERE is no more a royal road to fortune than to knowledge. He who uses not the judgment, and puts not forth the effort necessary to success, deserves not to succeed. *Success* is the reward of merit. There is no such thing as *luck*. Life has no *accidents*. There are misfortunes, it is true, which we neither forsee nor avoid. Events there are whose causes we can neither forsee nor control. But these are the exceptional cases, and their resulting disasters may usually be overcome by other and greater success.

The more we understand of Nature and her laws, the better able are we to provide against misfortune. The more we understand of the principles and laws of trade, the better able are we to foresee financial changes, and prepare against financial disaster.

The farmer who neglects to plow and plant at the proper time, and to cultivate in the proper way, or to take proper care of his harvests when grown, may not be an eminent success in his business; but for this he is not to blame his luck, but himself.

The mechanic who has not learned his trade well, and turns out poor work for his employers, fails, as a matter of course; but it is not his luck or his misfortune, but his fault that good paying jobs pass his shop for his next neighbor's.

The man who is wasteful and extravagant in his living, spending more than his income, is not unlucky, but unwise; and should blame himself, and not his fortune or his stars, when he finds himself owing more than he can pay.

A young man starts in life with the intention of acquiring a competency and living in comfort. He marries a young wife, and both have the same aims and purposes. Both are industrious and frugal. They waste no time. They spend no money unnecessarily. They easily make their income exceed their expenditures. To them the progress to fortune is an easy forward march.

This is not luck. Their success is not an accident, but a result—precisely such as must always follow such causes.

Another young man has also married a young wife. But they have no ideas of economy or habits of industry. In their stead are notions of extravagance—fashionable attire, fine houses, fine furniture, high living, and gay society. They fail, as a matter of course. Their expenses exceed their income; and the occasional visits of officers with writs to their house admits of very easy explanation. If they do not learn wisdom from their failure, and change their habits, they can never take the first step on the ladder of fortune.

This reckless running into debt—this spending of money before it has been earned—this silly vanity that apes the life and habits of those of greater wealth, is wrong in itself, and must keep even the most industrious in life-long poverty. Persons of such habits fail, and ought to fail. It is not right that one should reap the rewards without practicing the virtues of industry and economy. In business, as in nature, this is an inevitable law, and no one can succeed who disregards the necessary conditions.

Failure, like physical pain, is for our good, warning us to make amends by removing the causes that have led to it. Nature is right. We should not complain of her laws, but accommodate ourselves to her inexorable conditions.

"But," says some one, "Old Meanness has succeeded. He is rich. Has success rewarded merit in his case?" This is a great mistake. He has not succeeded. He has amassed money, it is true, but his life is one of the most pitiable of all failures. See him as he walks the streets, preyed upon by the miser's demon. Does he look as if his life had been a success?

Knaves and rogues and swindlers may amass wealth, and often do. But God has linked to every offence its appropriate penalty, and there is no escaping consequences. Stand up Old Meanness by the side of Mr. Honest Man, whom he has wronged out of house and home. Look them in the face. See the honest, happy expression of the one, smiling even in his misfortunes; the other—the demon of avarice at his soul has carried its contortions to his very countenance. Look at these two, and say which has been the successful man. Which of the two is the more worthy of your respect—the honest man, upright in his losses, or the fellow who has stolen himself rich?

But property is necessary to comfort. A man may be happy without it, yet, with it, he and his family will be at least more comfortable. Mr. Honest Man made a mistake. He should not have placed himself in Old Meanness' power. Though his failure has not been so great as that of the rogue who wronged him, he has, nevertheless, failed where he should have succeeded. Though it will be a great comfort to him, as he looks back on the transaction, to feel that he has not sacrificed his integrity, the loss of the hard earnings of the best years of his life must furnish unpleasant recollections. But if he goes to work with energy, economizes his time and earnings, makes his daily gains exceed his daily expenses, he will soon recover from his losses, and possibly have reason to be thankful for the dear lesson experience has taught.

Industry and economy—these are talismanic words. He who has learned them is already on the road to fortune.

THE AGRICULTURAL PRESS.—One hundred years ago it was unknown, to-day it has no superior. And as we enter upon our centennial year, it is with pride we refer to it. We mean when we say the agricultural press, those who write for the benefit of the tiller of the soil, and those papers published in the interest of the farmer. The farmer to-day has access to a literature as pure, as elevating and instructive for his calling, as any other profession. This is the more wonderful, when we remember that fifty years ago, "book farmers," or science applied to agriculture, was sneered at by ninety-nine of every hundred farmers in the land. Now the farmer that has not one or more weekly papers on his table, is going to the wall, "or west." It is a truism, he cannot grow nor sell and compete with the well read, well posted farmer. It is plain to us that in the future there is still greater achievements for this press. The portals of science just begin to reveal the wonderful storehouse of nature to the tiller of the soil. Chemistry just begins to shed its light on the first great occupation of man. Entomology, botany and other kindred sciences have a storehouse of knowledge so full of interest to the tiller of the soil, that though the next centennial may seem a great way off, they will not have scarcely began to unfold their wonders, when our second centennial shall herald its coming with bells and cannon. See what has already been done in perfecting animals, fruits, flowers and vegetables! And yet no one can deny that we have but just entered this field of progress. It needs no prophetic vision to assure the farmer that his mission is coming to the front, and that the agricultural press has but just begun its career. Onward to duty, is the watchword.—*A. S. Moss, Chautauqua Farmer.*

EVERY FARMER SHOULD DO HIS OWN THINKING.—The *Country Gentleman* very truthfully says that it is only within a recent period—at least as compared with the epoch of positive assertion, thirty or forty years ago—that we have found out in farming how completely truth too broadly asserted becomes falsehood, with how many qualifications and limitations theories must be hedged about, and what folly it is to lay down any single dogma for the universal acceptation of all. And, as a natural consequence in our agricultural literature, the tendency is no longer to pronounce upon this or that practice as right or wrong in itself, but to elicit from those who are successful the modes by which and the circumstances under which success was reached, and then to leave each reader to judge for himself to how great an extent a similar course of action would suit his own case, and wherein it might be hazardous to his interests. What we ask, in a word, is the experience of others—what we wish to teach, that each should think for himself.

FARMERS, mechanics, merchants, give your sons a moral and intellectual education as well as an education of facts. Put not a single dollar away for one of them, to be given after you are gone—while there is a school where they could learn, spend it there. Put it where the Sheriff cannot take it from them, or the money changers get it through their ignorance. Put it in the mind, in the brain, and when you are gone, they will rise up and bless you. But above all, don't say "we have got along without education, and our children are no better than we are;" that would be a disgrace to the age in which we live, an insult to intelligence, a slander upon common sense.

THE *Indiana Farmer* of November 6th says: In all our struggles for gain—our desire for fine stock, fine strains, and development of stock—we should not forget that our sons are also developing into better or worse men, in proportion as we care for and train their minds. A taste for good reading and habits of thought should be cultivated in their younger years.

"YES, I know it; I said so; uncomfortability of temper—them's the words that does it. Well, is there not allers uncomfortability of temper in every family, and allers has been and allers will be? Only in the good old times they used to screw it down and keep it under, and they managed to get along without and of your divorces."

THE wheat crop of the United States in 1870, according to the census, was 287,000,000 bushels. In 1872 it was estimated at 246,000,000, in 1873 at 287,000,000 and in 1874 at 300,000,000 bushels, and the average for the last five years is about 280,000,000 bushels.

THERE seems to be a law of animal life that each individual, to be healthy and strong, must have, at least, a certain amount of room. That whenever this law is violated by crowding too many individuals of the same species within a certain space there results disease and degeneration or death.

To Contributors.

Write.

BY OLIVER WENDELL HOLMES.

Yes, write, if you want to, there's nothing like trying;
Who knows what a treasure your casket may hold?
I'll show you that rhyming's as easy as lying
If you'll listen to me while the art I unfold.

Here's a hook full of words; one can choose as he fancies,
As a painter his tint, as a workman his tool;
Just think! all the poems and plays and romances
Were drawn out of this, like the fish from a pool!

You can wander at will through its syllabled mazes,
And take all you want—not a copper they cost—
What is there to hinder your picking our phrases
For an epic as clever as Paradise Lost?

Don't mind if the index of sense is at zero,
Use words that run smoothly, whatever they mean;
Leander and Lilian and Lillibullero
Are much the same thing in the rhyming machine.

There are words so delicious their sweetness will smother
That hoarding-school flavor of which we're afraid—
There is "lush" in a good one, and "swirl" in another—
Put both in one stanza, its fortune is made.

With musical murmurs and rhythmical closes
You can cheat us of smiles when you've nothing to tell;
You hand us a nosegay of milliner's roses
And we cry with delight, "Oh, how sweet they do smell!"

Perhaps you will answer all needful conditions
For winning the laurel to which you aspire
By docking the tails of the two prepositions
I' the style o' the bards you so greatly admire.

As for subjects of verse, they are only too plenty
For ringing the changes on metrical chimes,
A maiden, a swoon beam, a lover of twenty,
Have filled the great basket with baskets of rhymes.

Let me show you a picture—'t is far from irrelevant—
By a famous old hand in the arts of design,
'Tis only a photographed sketch of an elephant—
The name of the draughtsman was Rembrandt of Rhine.

How easy! no troublesome colors to lay on,
It can't have fatigued him—no, not in the least—
A dash here and there with a hap-hazard crayon,
And there stands the wrinkled-skinned, baggy-limbed beast.

Just so with your verse—'t is as easy as sketching—
You can reel off a song without knitting your brow,
As lightly as Rembrandt a drawing or etching;
It is nothing at all, if you only know how.

ADVANTAGES OF WRITING.

We are told that the poet Cowper once contributed an article to a periodical published in his time on the subject of "Keeping a Secret." Although written in a spirit of levity and banter, it had such an effect upon himself that he says "he never told a secret afterwards." We do not know which most to admire, the candor of the poet or the success of his essay at least upon himself. This little incident shows what an effect can be produced upon our minds and characters by boiling down our ideas occasionally and pouring them out on paper to crystalize. They then become definite and tangible.

In the same line of thought, we are told of a witty French philosopher who said that when he wanted a book on any particular subject, and could not find it, he wrote one. And why should he not? He has access to the same materials that anyone else has, and why not put them in order?

Writing upon any given theme is a wonderful collecter and condenser of thought. Our ideas at first come like the invisible particles of moisture that rise from the Southern oceans. Ascending to the sky above they soon form clouds which, borne on the winds, flood the northern regions of the earth with refreshing showers. So our ideas, vague and misty at first, soon overspread the canopy of the brain and flood the whitening field of manuscript with inky floods of thought.

Indeed, the meditative writer will often be astonished at the amount of his knowledge on any given subject when he attempts to write about it. His thoughts will at first come slow and single, like the twilight stars of evening, but in a little while his whole mind becomes illuminated with the twinkling gems of thought.

Walter Scott, as a school boy, was the butt of the school, and his teacher pronounced him a dunce. But Sir Walter Scott, the novelist, historian and poet—the Wizzard of the North—has entertained the world with his witching stories, instructed it with his histories and electrified it with the pathos and sublimity of his poetry.

Bulwer somewhere frankly acknowledges that it was all up-hill business with him when he first began to put pen to paper. He was not only unable to collect his ideas, but, unfortunately, he had no ideas to collect! Can you imagine, kind reader, a more hopeless case than this? And yet, behold his star, proudly ascendant, shining brightly among his peers in the galaxy of English literature.

We shall not touch upon innate ideas, or acquired ones, either. We shall not inquire whether the infant mind is a *tabula rasa*—a virgin sheet of white paper as yet not written upon, nor argue that thought is or is not a secretion of the brain, as milk is of the breast, and both of them elaborated from the food by that wonderful alchemist, the human stomach. We care not whether according to this materialistic theory, an ear of Indian corn might be sent to Congress and electrify the nation with its eloquence. Nor shall we undertake to discuss such questions as the spiritualistic theory, that it is to ministering angels that ever hover around us, we owe all our best and brightest thoughts. We will not, therefore, be like the man who,

> "On hypothetic dreams and visions
> Grounds everlasting disquisitions,
> And raises endless controversies
> On vulgar theorems and hear-says;
> Grows positive and confident
> In things so far beyond th' extent
> Of human sense, he does not know
> Whether they be at all or no!"

But one thing we do know. The cultivation of the faculties of the mind—perception, observation, comparison, reason, memory, or whatever they may be called—strengthens them; and the attempts to express in written language the results of that culture make each effort easier than the last, until the persevering writer acquires a facility of expression as astonishing to himself as it is pleasing and instructive to his readers.

But the point which we have attempted to make in this article is to induce the many and intelligent readers of the Agriculturist to take up "the gray goose quill" and become better acquainted with its use and power. "The pen is mightier than the sword." There are thousands of our readers, young and old, of both sexes, who would find it greatly to their benefit to jot down their thoughts daily, about the house, the farm, and the million of topics connected with active life, its mission and its duties. While we cannot all expect to gain great renown as writers, we should feel it our duty to add our might to the general fund of useful information. We who can appreciate the benefits we receive from the thoughts and experience of others should be willing to give our own for others' benefit. There is no farmer, mechanic, or other industrial person, no house-keeper or general observer, but has some ideas and knowledge gleaned from life that might be of use to others. A farmer who reads agricultural papers, sees something occasionally that he might criticise to advantage, and could find time to talk about many practical things. Then why not write down your thoughts, and give us your experience? We never yet talked with a housewife who could not give some recipe, or who had not some excellent rules for labor-saving management. We want just such practical ones to write. Your communications, if not used, will be respected. We want the young men, and young women to write. A little play of the imagination is often refreshing. If we cannot use every contribution we will be frank with you, at any rate. Remember ths prisoner's spider who did not reach the opposite wall until after the fiftieth attempt.

Hygienic.

PRACTICAL HEALTH TOPICS—NO. 2.

BY "JEWELL."

FOOD.

In speaking on this subject I am aware of undertaking a great and exhaustive work, open to conjecture, theory and research by learned men, as well as the various hobbies of the ignorant and thoughtless ones. Still, a few plain remarks on the subject, anything, in fact, to set the people to thinking on so important a matter as the food we eat, of which the blood is made, which in turn supplies bone and muscle, tissue and brain power, may not be amiss from any source. It may be well for us to see ourselves, in this Centennial year of the nation's growth and pride, as others see us and as we are—"a nation of dyspeptics." Yes, scarce a healthy man or woman can be found in all our land, of American parentage. Indeed, our historians say, that were it not for the foreign element that is mixing with the Yankee blood, our nation would die out! Oh, glorious America! Oh, boasted civilization and vain ambition! How much more might we be and do if we were strong-bodied, like the German and Irish! And what gives them the strength and vigor we lack? Not intelligence nor climate surely; for in spite of our feeble bodies, the brains are *equal*, if not superior—taking the masses—to either or any nation. Then what might we not expect from bodies sound and robust. And our climate cannot be excelled in any land, taken collectively. Our habits of life vary little with other nations—save in our *food*—if we except the high-pressure speed at which we live. It is well known that the Irish, as a nation, live largely on potatoes, vegetables, coarse bread and milk; the Scotch ditto, with the addition of oatmeal, which is indispensable at each repast in some form; while the Germans use coarse, hard, stale bread, vegetables, but little fresh meat, and are much given to coffee and beer and a social good time which greatly aids digestion. The woman work hard, but out-of-doors and less over a hot stove than our people. In none of these countries do you find the everlasting hot bread or biscuit, pastry, fresh pork and salted too, fried meat and potatoes, confections of all kinds, as we do in our land. A German baker told me that he never made a pie or fancy cake in his country; had to learn that here. It was the same with bread-making; he could not sell the old country style of bread here. Consequently they lose their health after coming and remaining long enough to contract our habits of eating. Many physiologists claim that we partake of the nature of the food we eat; as, for instance, the carnivorous animals are more savage when fed on meat than when they eat only grains or vegetables; and those Indian tribes who live by hunting, eating meat as the staple article of diet, as the Apache, Navaho, etc., are savage and unfriendly to the whites, cunning and wild, never to be trusted, while those nations who lead a pastoral life, cultivating fruit and grain, and raising cattle for use rather than for food, like the Pemos of Arizona, the Zuni, Moquis and Pueblos, of New Mexico, are friendly to the white s and at war only with the savage tribes.

If, then, food can effect animals and tribes of Indians, as we see it does, why not bring it home to ourselves, and see if our diet is such as to make us the highest and best that is possible. While the land is flooded with health tracts and magazines devoted to this question, like the *Science of Health, Herald of Health, Laws of Life, Health Reformer*, and plenty more like them, surely none of us should ignorantly close our eyes and ears to so important a subject.

Careless Handling of Children.—I wish to enter a protest in the name of all nervous persons and of the injured little ones against the reckless way in which many heedless persons express their love for children, such as lifting them up by their heads, tossing them up in the air, carrying infants on their hands without any support to their backs, and otherwise endangering their limbs and senses. I have now in my mind the case of a man who was rendered a cripple for life through his father's carelessness in lifting him by the ankles while he was a small child, he (the father) having unfortunately lost his balance and turned his child's ankles in such a way that he was lame ever afterwards. Two different persons have told me that they knew, when too late, that by their thoughtless play with them they seriously injured infants entrusted to their care, one case resulting in spinal disease and the other in fits. And yet it is a sight daily to be seen—that of people doing these things. Do give the little folks tender handling.—*Rural New Yorker.*

Open Your Windows.—There is good sense in this. There are some houses in every town whose windows might as well be sealed in with the walls for any purpose they have but to let in the light. They are never opened, Summer or Winter. In Winter it is cold; in Summer the flies stray in, or if they are netted the dust sifts through the nets. Now you can tell a person who inhabits such chambers when you pass him in the street, there is such a smell about his clothing. You long for a sniff of cologne, or hartshorn, or burnt feathers, or something of the sort to "take the taste out." A house that is never aired has every nook and corner filled with stale odors of cooked meats, boiled vegetables, especially cabbages and onions, which, as the weeks go by, literally reek in their hiding places. Who has not wished sometimes to hang a new set-

vant's clothing out of doors some frosty night until it should be thoroughly aired? Fine ladies come sweeping into church with their velvets and silks, said velveta and silks giving unmistakable evidence of having been housed in just such shut up chambers. Oh, what a tale that odor of pork and cabbage tells about that lady's style of housekeeping! The very garments of the children tell the same story of uncleanliness. It is bad to have unwashed clothes, but there may be an excuse for it; but what excuse is there for unaired ones when the air is so cheap and free? There is death in such close rooms. Better a swarm of flies or a cloud of dust—better frost and snow in a room than these intolerable smells. Dear girls, the first thing in the morning when you are ready to go down stairs, throw open your windows, take apart the clothing of your beds and let the air blow through as hard as it will. There is health and wealth in such a policy. It helps to keep away the doctors with their long bills. It helps to make your eyes sparkle and your cheeks glow, and to make others love your presence. Girls who live in those close, shut-up rooms can hardly be tolerated in any circle.—*Hall's Journal of Health.*

Health Maxims.—The best three medicines in the world are warmth, abstinence and repose.

Whatever promotes a comfortable and harmless state of mind promotes health.

Men consume too much food and too little pure air. They take too much medicine and too little exercise.

Patent medicines are temporary in their effects; they alleviate or smother, instead of eradicating disease.

Very many diseases are laid at the door of "the weather." It is the want of weather which brings multitudes in our larger cities to the timely grave.

In small quantities and occasionally many things may be eaten with advantage, which, if eaten continuously for weeks and months, or in inordinate amounts, would occasion serious results.

Persons may outgrow disease and become healthy by proper attention to the laws of their physical constitutions By moderate and daily exercise men may become active and strong in limb and muscle.

Pads and supporters are all pernicious and worse than useless, because they teach the system to rely on them, and cannot support one part of the body without causing an unnatural strain on some other part, and to that extent tend to disease that part.

To all young persons, to students, to the sedentary, and to invalids the fullest sleep that the system will take, without artificial means, is the balm of life; for without it there can be no restoration of health and activity. Never wake up the sick or infirm or young children of a morning. It is a barbarity. Let them wake of themselves.

Speaking of changing the clothing, we consider it hazardous to lessen its amount after dressing in the morning, unless active exercise is taken immediately. No under garments should be changed for lighter ones during the day ordinarily. The best, safest and most convenient time for lessening the clothing is in the morning when we first dress for the day.—*Dr. Hall.*

Spring Hygiene.—The New York *Tribune* gives a few timely hints in regard to the mistake people often make in early Spring; when the weather looks fine, bang bright but cold, in going out with insufficient protection in clothing, and in letting the fires in the house go out too soon. The old-fashioned belief of our grandmothers that there was a fatal influence in the Spring air, was not so great a mistake, but was founded on experience, and they fought against it with flannel wrappings and woolen stockings worn until June; and we would do well to take a hint in this direction. The records of our physicians show that the standard of general health is lowest in the Spring. This is partially due to the nervous exhaustion of the labor in closed rooms in the Winter, and partially to the less wholesome diet, which, however good it may be, is never equal to that of Summer, with its fresh vegetables and fruits. It is, therefore, necessary to be prudent in Spring, and instead of exposing ourselves to the danger of taking cold, to be very careful how we clothe our bodies, heat our houses and fill our stomachs.

AN EPISODE IN MY EXPRESS LIFE.

BY "JOE."

It had been one of those terribly sultry days that are sometimes experienced in the Sacramento valley, and, in fact, in all of the interior valleys of California, and which no description can convey to the mind of those who have never "been there themselves." I was the sub-clerk (scrub-clerk was what my teasing companions were wont to call it) in the express office in a town where the stages from the mines and Sacramento centered, and from the very large amounts of treasure that passed through our hands our office was considered quite an important one.

As I said, it had been very sultry, and even the light work of the office had nearly exhausted us. The stages, with their freights of gold-dust, and dust-laden and begrimed returning miners, had come and gone, and those bound for the mines with their coin, and "spick and span miners" that were to be, had gone their way also, and we closed up our day's work, thankful for the approach of the cool and refreshing night.

The porter and I slept in the office, while the agent, or head man, had a room adjoining, the door of which opened into the main office.

Night dropped down upon us with its cooling breath, and we sat in the gloaming, chaffing one another and chatting over such things as lone men will who have been a long time away from home. At length the porter and I built up our beds outside the counter, in the airy office, and stowing ourselves away under the comfortable blankets, which, notwithstanding the heat of the day, were a necessity at night, we were soon lost in the mazes of dreamland.

How long I slept I know not, but I was suddenly roused by a heavy hand laid on my mouth and the not very dainty touch of a metal bar to my temple (which, to my gradually awakening senses, resolved itself into the muzzle of a pistol), and a hoarse whisper of "Lie still, or you're a dead man."

I was limp as a rag in an instant, for I knew well what was up. The notorious Jack Powers had been collecting illegitimate tribute in the country about, and our office attracting his attention, here he was. To bind and gag me was short work, and I was tossed over the counter like a pinioned sheep, coming with a bump onto the floor and the porter, who I found had preceded me with a similar experience.

My ears were free, and my whole attention was concentrated in the sense of hearing. I could, after a little, trace the robbers by their foot-falls almost as well as I might have done by sight, by the dim light we always left burning in the office.

The agent was brought out from his room, bound and seated in a chair. He was then ordered to deliver up the keys of the vault, in a tone which meant "no delay." He demurred, however, and was coolly advised that his personal safety depended on compliance. The keys were given up, and the robbers set to work at the vault. A combination lock balked them and the agent was called upon to give the combination. A short parley took place on this, for the agent was no coward, and he thought he might gain time enough to frustrate the designs of the robbers. But he reckoned without the host. The ominous "click" of a pistol was heard, and "two minutes for that combination!" was the word. Considering discretion a virtue just then, he practiced it, and gave, in a short pause, broken only by the sound of the key, muttered curses, and then an impatient "D—n this mask; I can't breathe," from the operator, next hurried steps and a fierce, but subdued, voice speaking to the agent—

"Curse you; you've lied to us. It's *not* the combination, and we'll fix you!"

"It *is* the combination," I heard the agent say. "You can't have worked it right or you would open the door."

Again the combination was given, carefully and clearly. Again a pause, with the "click, click" of the knobs and key, and then, to my relief, the creak of the swinging door. The tramp of the robbers in and out of the vault, the "sug" of the plump bags of gold-dust as they were dumped into a sack was all that I could hear. Then came the "clean up."

"Well, Cap," says a gruff voice, "we are all right; what'll we do with these fellers?"

"Light out and leave 'em," a musical, manly voice replied.

"Not much," returned the gruff one. "This 'ere feller has seen too much o' *me*. That cussed door made me hot, and I couldn't stand that mask, and this feller knows *me* better'n his own brother. *He's* got to go, *sure!*"

"Guess not," said the quiet, manly voice. "It was your own fault. We've got all we come for, and we'll take no more than we want."

"But I tell you *my* life is wuth more to *me*, and to you, too, than *his'n*," the gruff voice answered; "and, by G—, I'll take no chances in that line."

"Bill," said the cool voice, seeming to grow cooler as the other heated; "this yer is between you and me. Who is captain of this party—you or me? *I* say we go as we are; and if there's to be any shooting there's *two* to do it."

Much more was said by both, and my blood curdled in my veins to hear a man's life made the subject of such contention, the man most interested sitting, meanwhile, bound hand and foot, and unable to help himself. Finally, the gruff voice softened down a little, as if convinced, and said, "All right, Cap. I was wrong and you was right. You go ahead with the rest of the boys and I'll stop behind and keep these fellers from squeaking right away, and after you're well away I'll jine you."

"Not much, Bill," said the manly voice; "that's *my* biz. I don't leave any of you fellers to look after *my* safety. I'll stop here *myself*, and you go along with the boys. I'll meet you at the old place all right."

A little discussion took place on this point, in which the cool voice came out ahead and the gruff one, with a muttered curse or two, was silent.

Silence—what silence that was, too!—for what seemed an hour, but which was but fifteen or twenty minutes, and the quiet, manly voice says, "Mister, you'll allow I saved your life to-night, now you must give me a show of one hour for mine—after that I take my chances."

A striding step, a bang of the door, a galloping horse, and—*silence.*

I had been squirming around, easy like, trying my bonds, and had got myself pretty loose, so that it took but a few minutes' tugging to get free, and I was by the side of the agent. He was in a cold sweat, with his teeth clenched and an ashen paleness over his face, visible even in the dim light of the office. I loosened him and the porter, and in a short time the town was alarmed.

The amount taken was not as large as it might have been at almost any other time, as the receipts from the mines had been light that day. But it was enough to cause the express company to offer a handsome reward for the arrest and conviction of the robber whom the agent was so well able to describe. But nothing came of it for years.

The agent received a terrible shock, which affected his health to such a degree that he could never even allude to this night's experience without the perspiration starting on his brow. He was given a pleasanter and more lucrative situation in the San Francisco office, and was looked up to by the fledgling expressmen as "grit to the backbone."

One day he received a telegram from a branch office in a southern mining town to "come up immediately." He obeyed, and on arrival was unsuspectingly ushered face to face with the man who had so fiercely argued with his leader for a man's life. The robber had been shot through the lungs while being pursued for horse-stealing, and the reward yet out had sharpened the wits of his captors, and they wanted the agent to identify him.

The identification was complete, and horrified the spectators, for the instant the agent saw the robber he sprang for him with blazing eyes and clenched teeth. The bystanders immediately grappled him, and then the ensuing scene was said to be terrific. The robber, with his life ebbing away, lay supinely on a pallet, blood slowly oozing from his mouth, while the agent raged, a madman, in the hands of the bystanders. He foamed at the mouth, cursed the dying wretch as never man was cursed before, and was finally dragged away to fall, weak and exhausted, into a chair in an adjoining room.

The robber died of his wounds, without disclosing anything concerning the robbery, but the recollection of it, to us who were there, is a terrible reality, as vivid as ever.

Stock raising in San Diego County has experienced a very decided increase during the past year, the aggregate value now being $577,903, against $373,306 in 1874 and $320,680 in 1873. The amount of bees has also increased from 2,458 hives a year ago, to 8,761 hives in 1875.

In making whiffletrees, they will be srtonger if the front side of the whiffletrees is nearest the heart timber and the back side toward the bark; they will retain their shape longer if the timber be split in this direction, not across the grain of the wood.

Do not forget to renew your subscriptions at once. In doing so, obtain the names of your neighbors also.

Boys and Girls.

The Country Boy.

"PITY the poor little country boy,
Away on his lonely farm!
The holidays bring him no elegant toy;
He has no money; there is no shop;
Even Christmas morning his work
doesn't stop;
He has cows to milk,—he has wood to
chop,
And carry in on his arm."

Did you hear that, Fred, as you came through the gate,
With your milk-pail full to the brim?
No envy hid under your curly brown pate—
You were watching a star in the morning sky,
And a star seemed shining out of your eye;
Your thoughts were glad, you couldn't tell why:
But they were not of toys, or of him.

Yet the city boy said what he kindly meant,
Walking on by his mother's stately side,
With his eyes on the toy-shop windows bent,
Wishing for all that his eyes could see;
Longing and looking and teasing went he,
Nor dreamed that a single pleasure could be
Afar in your woodlands wild.

You ate your breakfast that morning, Fred,
As a country boy should eat;
Then you jumped with your father upon the sled,
And were off to the hill for a load of wood;
Quiet and patient the oxen stood,
And the snowy world looked cheerful and good.
While you stamped to warm your feet.

Then your father told you to take a run,
And you started up the hill;
You were alone, but it was such fun!
The larch and the pine tree seemed racing past
Instead of yourself, you were so fast;
But, rosy and out of breath, at last
You stood in the sunshine still.

And all of a sudden there came the thought—
While a brown leaf toward you whirled,
And a chickadee sang, as if they brought
Something the wonder or surprise for you,
As if the trees to delight you grew,
As if the sky for your sake was blue—
"It is such a beautiful world!"

The graceful way that the spruce trees had
Of holding their soft, white load,
You saw and admired; and your heart was glad,
As you laid on the trunk of a beech your hand,
And beheld the wonderful mountains stand
In a chain of crystal, clear and grand,
At the end of the widening road.

Oh, Fred! without knowing, you held a gift
That a mine of gold could not buy:
Something the soul of a man to lift
From the tiresome earth, and to make him see
How beautiful common things can be—
A glimpse of heaven in a wayside tree—
The gift of an artist's eye!

What need had you of money, my boy,
Or the pretty money toys bring,
When every breath was a breath of joy?
You owned the whole world, with its hills and
trees,
The sun, and the clouds, and the bracing breeze,
And your hands to work with: having these,
You were richer than any king.

When the dusk drew on, by the warm hearth
fire,
You needed nobody's pity;
But you said, as the soft flames mounted higher,
And the eye and cheek of your mother grew
bright,
While she smiled and talked in the lovely light
(A picture, of pictures, to your sight),
"I am sorry for boys in the city!"

—[St. Nicholas.

"OUR CORNER."

Well, little folks, here we are, with so many letters I'm afraid the Editor will hardly give us room for them all, but Aunt Polly won't have to talk so much if you young folks keep the corner filled. Don't make your letters too long, and there'll be plenty of room for all. We'll let Jenny speak first, as she brings a rebus with her letter:

LIVERMORE, January, 1876.

Dear Aunt Polly:—I was reading the AGRICULTURIST and saw your Greeting to the Young Folks and the puzzle you gave out, and thought, as you asked the "cousins" to send in the answer if they could find it out, I would send it, as I had made it out. I think it a very hard one indeed. I did not understand it at first, and my brother showed me how to make out the first one or two and I found the rest out myself. The three-fourths of a cross is T; the circle complete is O; the upright where two semi-circles meet is B; the acute-angled triangle standing on feet is A; the two semi-circles are C-C, and the circle complete is O—all together forming "Tobacco."

I remain your friend, JENNIE D.

Well done, Jenny! Your rebus will be found below. I hope others will follow your example and send in original rebuses, charades, enigmas, riddles, conundrums—anything for us to puzzle our brains over.

SOQUEL, January, 1876.

Dear Aunt Polly:—My papa takes the AGRICULTURIST, and I have read the letters of the little boys and girls, so I thought I would try and write one. I have a nice little colt named "Stocking-feet." It is not old enough to ride yet. We—my brother Frank and I—have got a nice big black dog named "Nig," that we are training to work in harness. When we get him trained so he will work good, Papa has promised to make us a nice wagon. We have lost the paper that had your address in and don't know how to direct this letter. Mamma says direct it to the AGRICULTURIST Office, San Jose. From your nephew,

G. M. OED.

Aunt Polly is very glad you tried, and wishes every one would do as much. Next time direct to Aunt Polly, AGRICULTURIST Office, San Jose.

Dear Aunt Polly:—Mamma says that you want all the little children to write to you every month. I don't know what to tell you about because I don't know what you would like to know, but I hope some more boys and girls will write to you and tell what they got for Christmas. I think Tom's sister Mary was real good to write for him, don't you? I laughed at Tom losing his apples, but I think it was real mean to play such a trick, don't you? I believe I know that boy, Tim, that shot that rat, but his name ain't Tim. To-day it is snowing a little, right here in San Jose. GEORGIE.

What Aunt Polly wants to hear about is just what most interests you, and whatever you think would be interesting to the other little readers of Our Corner.

Aunt Polly:—I am twelve years old, but not too big to want to write to you, because I've guessed the puzzle you put in the paper, and hope you will give us a new one every month. I like puzzles. The answer to this one is "Tobacco," and I don't mean to ever use it. My father don't, nor Uncle Ed, and it don't seem as if a gentleman would, either.

EDDIE T.

Certainly you're not too big, Eddie. Aunt Polly allows a great deal older boys than you to write to her, provided they don't use tobacco.

SPRING LAKE, Cal.

Dear Aunt Polly:—I am afraid to try to write you a letter, because so many little boys and girls will write so much better letters than I can. I think of lots I want to say, but somehow I don't know how to tell it in a letter. Mamma says we should always try. I think it is a real nice plan to have a corner all to ourselves in the paper, and hope lots of little boys and girls will write letters for it, because it is such fun to read them. I did not guess your puzzle, but was told the answer to it, and I'm sure I hope that no one I like, or ever care to like, will ever use such nasty stuff. If all the girls in the world were like me they would just say to the boys, "If you use tobacco at all when you are men we will never, never speak to you, or go anywhere with you, or do anything you want us to—no never!" Would not that be just right, Aunt Polly? And they mustn't *drink whisky* either. Oh, Aunt Polly, I guess my letter is too long already, so I will close it. From your little friend WILLA ROSE.

It would no doubt be a good thing if every little girl, and big girl too, were as determined as Willa on the tobacco and whisky subject; but she must remember that there are habits almost as bad that little girls are apt to fall into. There isn't room in the corner this month for Willa's little brother, so he'll have to wait.

Aunt Polly thanks you all for your letters, and hopes to hear from a great many more cousins before next month. She is sorry she has no hard puzzles for you to crack this time, but she would like to see who can form the greatest number of separate words from the word "carpets." Of course you can use each letter as many times as you please.

Here is an enigma some one has sent us:

I was not in the beginning, yet was present at the creation, and with the morning stars when they sang together; with Moses when he talked with God and with the old prophets, but not with the disciples. I dwell neither on land nor water, yet am found in the ocean and on the continent. I am with the old in their sorrow, and share the joys of youth. I am a stranger to the rich, but the miser cherishes me in his gold. Am with the widow and orphan, yet dwell with the opulent and am embraced by all with love. I am with the school-boy when he learns his lesson or spins his top, and the schoolgirl speaks fondly of me when she exclaims, "O, do help me write a composition!"

Here is Jennie's rebus:

My first is in *heat* but not in cold;
My second is in *silver* but not in gold;
My third is in *fear* but not in doubt;
My whole is what no man can live without.

N. B.—The answers should always accompany puzzles that are sent.

Household Reading.

FRIENDLY LETTERS—No 1.

BY MRS. M. E. T.

DEAR EDITOR: Please permit me to express my admiration for the new volume of the AGRICULTURIST. It is delightful, and too much cannot be said in its praise. I would like, also, to thank those who have, by their labors, aided you in placing before us a magazine so admirably adapted to our real wants. Every page is fraught with interest. The selections are well chosen, the poetry excellent, and letters and other correspondence instructive in the highest degree; the whole presenting a delightful reality that cannot fail to be appreciated by readers everywhere. What a pleasant treat are the letters from the little folks to Aunt Polly? and who does not love to read them?

Please allow me to say to the

LITTLE BOYS AND GIRLS

who read the AGRICULTURIST, I hope you are all trying to be good children. Little boys, let me say to you, be very careful about the habits you form. Do not use bad words, do not swear, and above all never learn to smoke or chew tobacco, and some day you will feel thankful that these fetters do not bind you in slavery. I have a boy, taller now than his mother, and of whom I am proud. I will tell you of the little contract we made, when he was scarcely higher than my knee. Willie promised that he would never use bad words, never use tobacco, nor visit saloons before his twenty-first birthday. For these promises I gave him the pretty speckled hen and her brood of chicks, the beautiful hay colt that trotted so nicely, and then, if he kept his pledge faithfully till the specified time, he was to have other presents according as we may make further agreement. This contract is still standing firm. It has never once, to my knowledge, been violated, and I feel sure now that it will not be. Perhaps some of the little boys who read this would like to make such a contract. I think it a very nice plan, for bad habits are generally formed in youth.

Sometime, if our kind Editor will grant me space, and you wish me to, I will tell you some funny little stories that a mother's memory has treasured—the wise saying of a sister and brother that will make you laugh all over. I think your little letters to Aunt Polly are very nice, and I hope to see many of them in the AGRICULTURIST.

THE UP-COUNTRY LETTERS.

And now, if my letter is not already too long, I will say to my invalid friend—Yes; there is one reader at least that can "comprehend it all," that has "felt and endured" the very same, that can tell the same sad story. For twenty years I have been a member of this "Order of Wretchedness," submitting as patiently as possible to its cruel laws. Ah! if we only knew before entering what a gloomy place we should find, how careful we would be to guard our footsteps! But, alas! we venture on till we cross the threshold, until the door is shut; we find no way of escape, and no rest for the aching body. Separated from the happy outside world, everything seems changed. We cannot understand the unequal laws that govern our destiny. Not all the guilty are doomed to enter—some escape with impunity; others declare that injustice is done them—that the rod of affliction falls not in consequence of violated laws, nor through inherited sins.

Are we, then, unfairly dealt with? Does Mother Nature surround us with mystery in order to hide her partiality? Or does she grieve over our ignorance, and lament over our short-sighted vision? To these perplexing questions comes only the echo of a silent answer, too faint to satisfy the anxious soul. How much wiser to cease from worrying. Why oppress ourselves about that which we can neither make nor mend? Why be troubled about that which is beyond our sphere, and which only tends to lengthen the shadows that darken our pathway? Rather let us trust in Providence, believing that an all-wise Creator governs the universe.

And now, kind Editor, I once more crave your indulgence before concluding my variety letter. "A Devoted Subscriber" asks

HOW TO WASH FLANNELS

without "shrinking, changing color, and feeling sticky." Of course, some colors are so poor that a simple wetting will fade them; but aside from such exceptions, the first requisite is *good soap*. Never use any of the cheap chemical soap for flannels, but make a suds from good soap, in quite hot water. Rub the pieces to be washed quickly and carefully and wring them; then, in water equally hot, rub them through a very light suds. Two waters as usually sufficient to cleanse them. Wring as dry as possible, and

shake out the wrinkles. The entire process should be gone through quickly, and always on bright, drying days. This is my plan, and the best I have ever tried.

THE NECESSITIES OF LIFE.

BY MRS. LILLIBRIDGE.

The necessities of life, such as food, raiment, shelter, warmth, etc., are so indispensable to life and comfort that where we see the lack or want of them, it arouses our sympathy and thrills our hearts with pity. The horrors of slow starvation, or the death by exposure, as the cast-away upon the ocean, or the still more frequently met homeless, houseless wanderer, the foot-sore, friendless outcast, who meets no smile, no joy on earth—these vibrate each sympathizing chord of our natures, and we give of our abundance, or even share our scanty means with them. This is well. Surface sorrow strikes the eye and awakes the pitying spirit, which seeks to relieve. Would that this feeling were more general.

But how few think of the soul needs—the heart hunger—the slow starvation of the affections—the more than blight of all that renders life happy or desirable! How many maidens, forced to barter themselves for a home and find they are only unhappy wives and unwilling mothers, can attest this truth. There is an atmosphere of coldness in a loveless home—Oh! so cruel, so hard to bear. It freezes all the life-springs of endeavor, and sets a hopeless seal of discouragement upon the brow of youth, causing a poverty of spirit worse by far than the tattered garb of the street beggar. There is a sorrowing motherhood in unmated hearts and an orphanhood of soul in the offspring of such uncongenial parents. There is loneliness and desolation for those who yearn love and companionship. There is death—death by keenest of starvation.

Many possessed of wealth and fame, are writhing in torture and privation for their soul-needs are unresponded to, and their gold is but a mockery, and fame worthless to a soul who thirsts for love. Oh, no; the great necessities of life are not merely food and clothing for the body; that is well, but cannot satisfy all the aspirations of humanity. We want the blending of soul with soul, and life with life, in harmony and love. This is wealth worth possessing; this is an inheritance worth receiving. Let us cultivate it, live it, and bestow it more fully upon our children.

UP-COUNTRY LETTERS---NO. 3.

BY RACHEL A. ELY.

Fatigue, weariness of soul, discomfort, rain, mud, swollen streams and snow—all these, and a sense of homelessness, have been my daily companions the past week of travel to my retreat in these mountain hills where, in a charming little valley, I propose to tarry a while. But now that the sun shines once more, snow is gone, mud drying, and Nature smiles in her spring garments of emerald, my own flood tides are drying, hope again tips my weary heart with its golden light, and as the old aches and pains grow less under its magic touch, I calmly wait and fold my patient hands to watch if the quiet calmness of mountain air and life is truly building up wasted vitality and easing the everlasting cough which threatens to sunder soul and body. My hostess is one of the old-fashioned sort, fat and motherly, but full of duties—three men and four children beside myself constitute her family—but, by keeping steadily at work from early dawn until ten or past at night, she manages to keep ahead of her work. But wnen harvest times comes I fear she will fail. I sit and watch her by the hour (for the weather won't permit of my sitting outside yet), wondering how she can manage to keep so fleshy under such a press of work, and why, if she is truly healthy, is she so full of aches and pains. Sifting down to a breakfast table with fried bacon, hot griddle cakes, coffee, cream, fried potatoes and buttered toast, is simple enough, but yet this hearty woman eats a bit of toast and drinks a cup of coffee, and even that distresses her. To be sure, she is tired and warm with being up since four o'clock, feeding pigs, helping milk, etc, and cooking the breakfast, with the children about her wanting this and that, and distracting her mind in a thousand ways. I pity her, as I quietly lie in my adjoining bedroom and hear distinctly even the frying of the meat. No wonder she loses command of her temper, with three men watching and hurrying, but not offering to help her—all the children half dressed, and the baby crying from the cradle—the frying bacon making as much noise as any, and filling every corner with smoke, even creeping into my room. I wonder they don't open the windows and door and air the room. Can all this have anything to do with her weak digestion and gorged liver?

After quiet is restored, men are gone to work and baby sleeping, I go out, take my cup of new milk and bread, and, as I eat, watch the washing of dishes and sweeping of rooms—if it is not washing day—and I am more surprised continually to see how much and varied are this woman's duties. No sooner are the beds made, rooms swept, milk skimmed, dishes washed, butter worked or churned, and lamps cleaned—between all of which the care of the baby and the two-year-old boy and four-year-old girl must be attended to—than is the dinner to be got, with vegetables (mostly cabbage or beets), boiled salt pork and potatoes, and pudding or pie. Again the hurry and heat, and with blazing face and baby in arms she sits down to try to eat. Poor soul! a cup of tea, slice of bread and butter, or bit of pie, is all she can swallow—though she feeds the fretful baby, to keep it quiet, on pork and potato, with sips of strong tea. I wonder if such food is not one cause why the baby cries and is so troublesome—though she dont seem to be able to nurse it enough, eating so little herself.

Well, these thoughts tend to amuse me and when I gain strength I shall try to study them out, for I cannot understand these things. Do all farmers' wives work so—helping milk, feeding pigs, etc., besides so many in-door cares and inconveniences of house, carrying in water and emptying again, etc.? Her husband is kind and affectionate, but he thinks her strong and hearty, yet I know her to be ailing and hurt by the constant drain upon her system, which, I fear, will give way one of these days.

A VOICE FROM THE RURAL DISTRICTS.

DEAR EDITOR: I hear that an agricultural journal published in San Jose designs offering, for the accommodation of its numerous country subscribers, to fill orders in groceries, dry goods, or fancy articles at a small advance upon the first cost.

If yours be the enterprising company ready to help us poor dwellers in rural districts in making life more endurable, accept our most earnest thanks. Your estimable paper has been a welcome quest at our fireside ever since its first number was issued, and the valuable hints for the farmer and stock raiser, with the useful household reading, make it the *very best* paper published on this coast. Your friend and well-wisher,

HOUSE-KEEPER.

[Yes; we have really undertaken to accommodate our subscribers by procuring any articles they may order on the best possible terms as to quality and price. We do this without asking remuneration in commissions. Persons who desire to take advantage of full markets, but cannot afford to spend the time and go to the expense of traveling, can be just as well, or better served by sending orders to us for anything sold either in San Jose or San Francisco. Our arrangements for doing this business, in both places, are most complete, and will be found thoroughly reliable.—ED.]

A HOUSEHOLD LETTER.

BY MARY MOUNTAIN.

FROM "OVER THE HILLS."

One of the pleasantest things I have found in the beginning of centennial year is the improvement in our agricultural papers. When the January number of the CALIFORNIA AGRICULTURIST came to hand, we first admired the handsome, new title page, and then a dip here and there assured us that it had brought a well-furnished interior, and such variety that each one might find something especially suited for self.

It is right that farmers' papers should be sociable and in some sort familiar in style, and I am often astonished that they suit our conditions of life so well, when prepared, as they must be, amid the distracting activities of the city.

Yet here they come from out those "noisy ways,"—come dropping into homes on hill or plain, breathing the very quiet of these homes, filled to the brim with sympathy and cheer, becoming thus a part of all our lives.

Last summer, when Jewell and her advisers were agitating the yeast and bread business, it became a lively topic for us, and how free we were endorsing this, or censuring that, according to the range of personal experience! There was great temptation to snatch a pen and take a turn at "stirring the dough," or giving the obstinate loaf a "raise;" but just then we were in the midst of the "company campaign," and one must look sharp or her own cake will be dough. If we always had time to write when the fit is on, when suggestion or question has roused the wish and ability to respond, the editor would be overwhelmed with "copy" and might even cry out in dismay, "save me from my friends!"

For my own part, I never read one of our good home papers without finding something to which I would like to respond, and in your last there is so much, so much—as if each contributor had brought a "best gift" to enrich the first offering of the year. Yet we feel sure there is plenty more as good and yet to come from Grandfather, Snip and Jewell, from Up Country Letters, Busy Bee, and brisk Nell Van, who can turn her hand to anything. To her I looked up with the profound respect that is due to one who can calmly and gallantly lead in the upper ranks of hygiene. How, then, can I describe the tremor of doubt and dismay that seized my mind as I stepped one morning inside her gate and sniffed—doughnuts! Nell Van frying doughnuts! I could as easily imagine "Watercure Trall" inside there eating them. However, that "smell may come from the neighbors." So I "composed myself," as Sairy Gamp would say, and rang the bell as if nothing had happened. But inside the door it smelt nuttier than ever, and I could not help asking the gay little woman, "Is it possible, Nell Van, that *you* fry doughnuts?" And she answered, truthful as George Washington, "O, yes; once in a while!" So I had something to think about as I came home, and was very glad I had caught her at it. For, although I read papers that do denounce doughnuts (and some deserve this ill name), yet I continue to make them in the winter, "to please my husband," and then, very kindly, I help to eat them up; for they are plain and light, no more greasy than a piece of bread and butter.

There are two prime faults that spoil a great many doughnuts. Fault No. 1—Made up too rich, or two soft, and sure in either case to soak fat. Fault No. 2—Fat not kept at boiling point. Must be boiling (not burning) all the time.

A receipe for doughnuts in your January number is very good, I should think, if the butter were left out. It seems as if any grease mixed in the dough opens wide doors for the entrance of more grease while the cakes are frying. If mixed with skim milk, a very little cream may safely be added, and buttermilk will do for mixing if not too buttery.

Domestic.

FAMILIAR TALKS---No. 6.

BY SNIP.

BEFORE I commenced gardening I thought there was more fun than work about such an occupation, but have come to the conclusion that it is just the other way—especially when one has a piece of work nicely finished and suddenly finds it must all be done over again. For instance, last month, thinking one day it was going to rain, I hastened to set out nearly a hundred cabbage plants. The storm did come, and before it was over, part of the garden fence blew down, and before it could be repaired the chickens destroyed the plants. I have an idea they were better natured about that than I was when I had to set out another lot. But in spite of all discouragements and drawbacks, I enjoy the work; for while I am putting the dry seeds into the warm earth and watching the tiny plants springing up, I enjoy, in anticipation, as I shall in reality after a while. The nice, fresh vegetables I will have next summer independent of the vegetable peddler. Of course, it will take work and time and care, but do you not think I shall be well paid by being able to gather vegetables fresh and crisp? Last season, during a visit to a friend in this valley, I went with one of the girls to get some tomatoes. On entering the garden, I looked around to see where they were, and finally saw them pulled out of the weeds which were in greater abundance than the vegetables. "Do you raise many vegetables?" I asked. "No; somehow they do not do very well." I should think not. On a farm of 160 acres a small garden was fenced in, and one-third of it occupied with Mission grape vines that did not furnish enough fruit for the table, and of course none could be canned or put up in any way for winter. The remainder was used for vegetables, but as they received but little cultivation, and weeds will grow without it, the latter were in greater abundance than anything else. With a good artesian well on the place, not a particle of

water was turned to the garden. "To what use do you put that stream of water?" "None at all." Although the same man has owned the place for sixteen years, he put out last season, for the first time, some evergreen trees. With plenty of water, these trees had to be watered by hand—the water carried all of two hundred yards in pails. All the water for the house, and for washing, had to be carried still farther. When the chickens were not laying they were not fed, because "there was no profit in feeding" them then; and when they laid, why, they were "doing well enough on what they picked up." As a matter of course, chickens don't pay on that farm. The cows are milked anywhere from five o'clock to ten in the evening. There is butter on the table only half the time. "Cows don't pay without green feed;" but no effort is made to supply such feed. The boys are leaving home as soon as they are old enough, and the girls learning trades. This, as many a one in California can testify, is not an exceptional case. Is it because nature is so lavish that people think *no work* or carefulness is needed?

In strong contrast to this picture, another arises before my mind's eye, viz: farming in the old Keystone State. The outside things were different. The farm in good order, fences in perfect repair, a large, commodious barn, well filled. Instead of one or two cows to furnish milk and butter about half the year, five to eight and ten was the number found on nearly every farm, and a tub of butter for market every week. Every farm had a large garden and a good orchard. The farmer carried berries of nearly every kind to market, with apples, potatoes, beans, and nearly every week a basket of eggs. In the winter turkeys and chickens were sent off by dozens. True, many of the farmers were what people here would call "old fogies," but as a general thing they were intelligent, and once convinced that a new idea was a good one, *that* was the right way to do ever after.

I do not wonder that Eastern people are in ecstacies over California when they come here in the winter. Two days ago I had a letter from Baltimore in which the writer stated that the weather was bitterly cold and it was dangerous to venture out because of the ice. To-day, the 14th of February, is too pleasant for one to remain in-doors. Bright and warm, at least it is here in the mountains, the air pure and bracing, everything green and fresh, the wild flowers springing out of the warm ground—is it surprising that the first settlers here called it God's own country?

But you have such terrific storms in the mountains. Well, suppose we do. Do you not think we appreciate pleasant weather when it comes? We are free from fogs, have an ever-changing picture of beauty before us, for we can look over an area that you dwellers in the valley cannot see one-tenth of at one time. The air is pure and free, and we are healthy and free, too. Not so entirely shut out from the world as one might think, for we have the best of companions—books and papers.

THE GENIUS OF THE KITCHEN.

BY MRS. E. M. ABBOTT.

Yes, dear reader, why not? If we have always associated the word *genius* with those who excel in the arts and sciences, back of all these there is an army of presiding geniuses, who require for the faithful discharge of their duties and responsibilities, a talent more varied and a labor more complicated than that of a Raphael or a Hogarth, Who will deny that the faithful housewife is guiding a pencil which paints life-pictures more beautiful than those of a Guido.

The kitchen which we have in our mind's eye is not the separate hut, as at the South, where the "help" preside as of old, and which the wealthy mistress never sees the inside of from one month's end to the other; neither is it the California kitchen (where the Mongolian is the caterer and man of all work for a consideration in gold coin), built in shanty style of rough redwood boards, with one window looking out into the back yard; but the New England kitchen, with its sanded floor, in a large wing of the main building fronting the street, spacious, neat, airy and sunny, the throne of the wife and mother, where her large family have arisen to call her blessed, where her radiant face bent over the little cradle as she kept time with the rocking in a sweet lullaby, the constant accompaniment of her manifold labors and duties. The evening is occupied with her knitting-work, her only resting-spell, which she alternates with helping the boys in their "examples" in arithmetic and the girls with their sewing and embroidery. If this is a fancy sketch at the present day—the commencement of the Centennial year, a half-century ago it was true to life. The presiding genius of the kitchen was also the inspiring genius of the home, the central magnet and heart, which was eminently a position of honor if not of power. If the average woman of the present day cannot sit for the portrait herein drawn, we will not say that it is due to degeneracy, or that they are not as intelligent, refined and noble-minded as their mothers and grandmothers were; but that habits, tastes and opportunities, which are in the legitimate order of progress, have changed with the cycles of time. True, some apparently for the worse, but in the main we have added to the storehouse of knowledge, which in turn has "sought out many inventions" whereby bone and sinew labor have been lightened, thus adding to the means and opportunities of obtaining useful information, which in olden time was considered, for woman at least, superfluous. The time has come, and let us be thankful, that she can, in addition to those home duties which are first in importance, do even those better by participation in cares and objects outside. The one point conceded by every intelligent mind is the necessity of *education*. Not a smattering of reading, writing and arithmetic, but in its broadest and most liberal rendering. This change has been wrought by a comparative few, at a sacrifice of wealth, reputation and friends, by hard work, with no pay but hard names. But who will argue for a moment that the change has not been for the better for both men and women. After obtaining an education it is not in the nature of things for woman to rest satisfied without putting it to practical account, for every step towards enlightenment is only a suggestion for a further demand, and she is no longer looked down upon by men from an eminence on which experience alone, and not ability, placed them. A new age and era have come, which were as inevitable as the law of gravitation, and that which once had the name of fanaticism is now *common sense* and nothing more or less, and that is a very good thing to have in abundance. Among other things women have learned that the everlasting knitting-work is not their *normal state;* and men are no longer satisfied with wives who know nothing beyond the cooking stove. The genius of the kitchen may also be a genius in the arts and sciences.

San Jose, February, 1876.

CHOICE RECIPES.

CONTRIBUTED BY LADY CORRESPONDENTS.

Ginger Sponge Cake.—One cup of molasses, one of butter, two of brown sugar, four of flour, one of hot water, four eggs, one large teaspoonful of soda, two tablespoonfuls of ginger. Bake in a moderate oven.

Plain Railroad Cake.—One tablespoonful of butter, one cup of sugar, one egg, one and a half cups of flour, two-thirds of a cup of milk, half a teaspoonful of soda, one teaspoonful cream of tartar.

Lemon Pie Without Lemons.—Two tablespoonfuls of vinegar, one of flour, three of water, four of sugar, and one teaspoonful of extract of lemon.

Good Breakfast Cake.—Cold mashed potatoes mixed with flour and rolled out and cut into biscuits are very nice and healthful.

Oatmeal and Cocoanut. — Oatmeal mixed with grated cocoanut makes a very attractive cake to both old and young. Take three heaping teaspoonfuls of grated, or two of prepared dessicated cocoanut; add to it half a pint of fine oatmeal and two heaping teaspoonfuls of sugar; stir into it one gill of boiling water, and mix thoroughly together; turn it out on the rolling board, roll thin, and cut out as for common crackers. If wanted very nice, put a piece of citron and half a dozen currants into each cake, sticking them into the dough. Bake in a slow oven, and watch carefully lest they brown a shade too deep. To make crispy, let them stand a day or two in an uncovered dish.

A Nice Dish.—To cook fine hominy, boil with considerable water until soft, and thicken just before serving with corn starch dissolved in cold water.

Graham gems, with cocoanut and sugar added, are also an improvement on plain gems when eaten cold.

Graham Flour Puffs.—One quart of sweet milk, two eggs, flour to make a thin batter; fill the gem pans two-third full, and bake in a quick oven.

Mashed Potatoes.—Mashed potatoes are very nice with only salt and *sour* cream added. You will find it better than sweet cream to use.

To make nut cake, take one-half cup of butter, one and one-half cups of sugar, two cupsful full of flour, three-fourths cupful of sweet milk, one cupful of nut meats, two eggs, or the whites of four, one teaspoonful of cream tartar and one one-half teaspoonful of soda.

Women.

SOMETHING ABOUT WOMAN'S SUFFRAGE.

AGAIN women citizens of the United States have memorialized Congress, this time asking the right of suffrage in the District of Columbia. Why the "white men" who represent us—or pretend to—don't give up and let the women vote, is more than we can account for. Surely every man born of a woman should know that when a woman makes up her mind for a thing she will accomplish it sooner or later. This matter of suffrage for women is only a question of time, and that time can only be gauged by man's perverseness and stupidity. Here is a string of "whereases" and a "therefore" in substance as set forth:

Whereas, the United States Supreme Court has decided (in the cases of Spencer vs. The Board of Registration, and Webster vs. The Judges of Election of this District,) that by the first section of the Fourteenth Amendment "women have been advanced to full citizenship, and clothed with the capacity to become voters," and further, that this section does not execute itself, but requires the supervention of legislative power in the exercise of legislative discretion, to give it effect; and whereas Congress made an unjust discrimination in giving suffrage to colored men in the District of Columbia, and refusing to give it to women—thus depriving the intelligence and moral power of citizens of said District of a fair opportunity of expression at the polls; and whereas woman suffrage is no experiment, but is universally admitted to be successful in Wyoming, which has been redeemed from lawlessness through it; and whereas, a fair trial of equal suffrage for men and women in the District of Columbia, under the immediate supervision of Congress, would demonstrate to the country that justice to woman is policy for men; and whereas, "the woman citizens of the United States are governed without their own consent, are denied trial by a jury of their peers, are taxed without representation, and are subject to manifold wrongs, resulting from unjust and arbitrary exercise of power over an unrepresented class;" and whereas, this is the centennial year, when the spirit of '76 is breathing its influence upon the people, melting away all prejudices and animosities and inspiring in our national councils a clearer perception of individual rights; therefore, the memorialists pray Congress to establish a government for the District of Columbia which shall secure to its woman citizens the right to vote.

One of the strongest petitions of this kind ever offered was placed before Congress, in 1873, by Dr. Mary E. Walker. Among a host of reasons why suffrage should not be withheld from woman, the doctor urged the following strong point:

"The equality of the rights of women with men, when the Constitution was framed, was not questioned by our forefathers, for *women were at that time voting* in the State of New Jersey, and *continued to exercise the right for two generations,* without their constitutional rights ever having been questioned, *clearly proving* that it was the intention of the fathers to secure such rights to women as well as men. The fact that the women did vote unquestioned, proves *the spirit* of the Constitution, for it was in the time of its framing, and while its framers were *all living,* and ready to explain the spirit of the same."

Authentic reports from Wyoming show that great benefits have resulted from women's power to over-balance such evils as politically curse the communities where they are denied the ballot.

We cannot close this article without calling attention to the fact that a sister republic on this continent recognizes that woman has a right to her rights, at least politically, and no foolishness. Read the annexed on woman suffrage in Chili:

"A curious question has arisen in some towns in Chili on occasion of the inscription of citizens in the electoral registers. At San Felipe one woman presented herself for registration, one at Casablanca, and ten at La Serena. As the law makes no distinction of sex, and as the only qualifications required for citizenship are to have attained one's majority and possess a knowledge of reading and writing, the Boards decided to register said representatives of the weaker sex, so that at the coming elections women will be admitted to vote."

Correspondence.

DEEP PLOWING.

BY MECHANIC.

Ed. Agriculturist: The correspondence on this subject, in your last issue, reminded me of the fact that I had promised you an article on the same subject, and I propose to state facts, as they have come under my observation, believing demonstration to be the crowning point of theory.

In the famous Genesee valley (when it was new) some of the most successful farmers were advocates of shallow plowing, which succeeded for a time in producing fine crops. In a few years the shallow surface appeared to be exhausted of its fertility and produced very light crops, when deep and thorough pulverizing of the soil, to the depth of ten or twelve inches, again produced heavy crops.

The old, worn-out fields of Montgomery county, and other counties of Maryland and Delaware, in 1848, could be bought for 75 cents to $1 50 per acre. Shallow plowing and repeated cropping wore out the surface, and deep plowing —with a little guano for the first two or three crops, and the straw of the crops returned to the soil, with a little lime for a solvent—made the worn-out fields more productive than when the land was new.

I saw an old field of sixteen acres, in Jackson county, Ill., planted to corn in 1866: The field had been worn out by shallow plowing and repeated cropping with corn. Four acres of the field were plowed thirteen inches deep, three acres five inches, and the balance nine inches deep. The whole was thoroughly pulverized, but no manure was used. It was all planted in corn, on the same day, and all tilled in the same manner. Wheu the corn was ten inches high there was a rain of 4.26 inches in forty-eight hours, and no more rain until the crop was matured. The yield was eighty bushels per acre on the part plowed thirteen inches deep, forty-five bushels on that plowed nine inches, and about five bushels of "nubbins" on the five-inch plowing.

In 1867 there were sixteen acres summer-fallowed and thoroughly pulverized to a depth of fourteen inches, on an old farm of 170 acres on the Bois Brule bottom, about eighty miles below St. Louis, on the Mississippi river In the Fall it was ridged for corn and planted in the Spring—the first of April. The balance of the farm was plowed in the Spring twelve inches deep and planted in corn. The farm was settled by the French at the time of the settlement of Koskoskia, about 1666. It had never (before) been plowed over four inches, and repeatedly cropped in corn. The place had been rented for several years for ten bushels per acre, yet seldom raised enough to pay the rent; but in 1867 the ground and corn was thoroughly tilled, and the yield on the summer-fallow was 165 bushels per acre, and 80 bushels per acre on the spring plowing.

I came to Marysville, California, in April, 1871. I had a letter of introduction to Wm. P. Harkey, of Sutter county. Mr. H. showed me his wheat field, which had been summer-fallowed and thoroughly pulverized the previous summer to the depth of eight or nine inches. The wheat looked healthy and vigorous, notwithstanding the bed rock was near the surface and the wheat in the neighborhood a failure. This deep and thorough tillage yielded about twenty-five bushels to the acre.

Moze Ellis, of the Placer Mills, Marysville, had a farm not far from Mr. Harkey's, but nearer the Buttes, and deeper to the bed rock. Mr. Ellis informed me that he had a piece of wheat that season which was summer-fallowed twelve inches deep, and yielded thirty-five bushels to the acre. Mr. Ellis also informed me that the same dry season he tilled a piece for grapes *very* deep and thoroughly, and that he could, with one scrape of his foot, reach moist dirt any time in the summer.

I have given the successful experiments above mentioned as correctly as my memory serves me. If I have made any mistake, it can be ascertained in the last two cases by an appeal to Messrs. Harkey and Ellis. The former is now Sheriff of Sutter county, and the latter owns and runs a flouring mill at Tehama. Send them this communication, and ask them wherein I have erred.

A few more remarks, and my long article will close. First—From forty-two years of close observation, with much of my time spent in farming, and being an earnest advocate of deep and thorough culture—with all this, I am free to admit that there are two sides to this question. For instance, where virgin soils are very open and fertile, as in the Genesee valley and California, shallow culture often produces fine crops until the ground becomes packed by repeated cropping and working.

Second—I have noticed, in some instances, in California, that where land was plowed deep and the clods not pulverized by rain or thorough culture, the crops suffered much more from drouth than similar land that was tilled shallow and made fine.

Third—I have had the best success by deep and thorough culture for small grain, as well as corn, and found the roller, after seeding, beneficial; but when the top became tight, by rain after rolling, and liable to bake, the trouble was remedied by a thorough harrowing with a fine-tooth harrow, with the teeth well slanted back to prevent tearing up too much grain. What grain was torn up by the harrow, was replaced by the extra stooling of the balance. The harrowing, making the surface fine and loose, makes a good mulch to prevent the escape of moisture from below. I have tried this with wheat twelve inches high with benefit.

Fourth—I have often taken pains to discover the depth to which the roots of small grain penetrate the earth, and where the soil was loose and thoroughly tilled have usually found them at the bottom of the furrow, and often struggling (in a dry soil) to go deeper. There is no danger of tilling good corn land too deeply, and it is important for corn, if you desire thick stalks and large ears, to plow deep, pulverize fine, plant early, work the ground deep and often while the corn is young, and when the lateral roots start deep the surface fine until the corn shades the ground. If the soil and climate are good you have nothing further to do, except to harvest a large crop in the fall.

Every farmer who has corn land should make corn one of his rotation of crops, and feed it to hogs or other stock, and return the manure to the soil. I am very skeptical about the inexhaustible fertility of any soil when repeated cropping is the rule and no return made to the soil. Compensation is the universal law of nature, and it is easier to impoverish a good soil than to renovate one that is worn out by bad farming.

Whatever promotes a comfortable and harmless state of mind promotes health.

TREE CULTURE.

Friend Herring:—Your valuable paper has given hints and instructions on nearly every point in farm and garden matters, but I don't remember anything in regard to the *best kind of pears to graft on the quince*. I read some time ago that it was not best to graft Bartlett on quince stalk, but no reasons were given. I wish to graft a lot of seedling quince (set in place), and would like to graft some to Bartlett. If convenient, please tell me in March number if there are any real objections to Bartlett, and what are the best varieties to dwarf. I would like to know if there is any fruit I can successfully graft on white mulberry stalk.

The more experience I have with seedling trees, the better I like them. Where it is anyways difficult to start an orchard a tree that will not throw up an abundance of suckers is worth only half-price. Many of our long-shanked, smooth-bodied, short-root-grafted trees will not sprout about the trunk unless injured by some damage to the top or depredations of borers; then Mother Nature makes one more desperate endeavor to assert her rights, and shade the trunk in her own unrivaled style. The orchardist and gardener should assist rather than defeat Nature. I don't know a single point in favor of a small, suckerless tree.

A good growth of small suckers is a great protection from the many accidents to which even well cared for trees are liable, while the trunk at and near the ground will be better shaped and tougher in fiber for their attachment to it. As much *root* is made to develop a foot of sucker as a foot of limb, and by the time the root is all needed to sustain the top and fruit, the tree will be able to dispense with the sucker. Nature almost invariably starts her most stalwart trees as bushes. Any one who has taken out oak grubs knows what fine, loose, moist soil is found close about the stump. The close overhanging green bush has gathered moisture from every dew, and the leaves and grass have rotted and enriched the spot they could not be blown away from. It is only in close, moist swamps that trees naturally run up without sprouts from the root.

There has been so much written and said about the slovenly look of suckers around trees and the beauty of tall, straight trunks, that I feel I am on dangerous ground. I can hardly blame any one for casting admiring glances at a solid, Samson-built, mature man in close fitting pants; but will any sane person say that the immature, spindle-shanked boy, in short coat and tights, is a thing of beauty? But the young lady, with her drapery gradually increasing in diameter from the waist to the ground, is shaded and protected on natural principles. May fashion, in the near future, revive the *hoops* and leave off the *pullbacks*. Nature will revenge herself for every sin and indiscretion against her laws. I expect she has allowed the pullbacks as a punishment to us for saying and writing so many hard things about the way she starts, protects and develops her young trees.

C. A. W.

Cozy Nook, Feb. 9th, 1876.

REPLY.

The objection to grafting the Bartlett pear on the Quince is, that even on a strong pear stalk it is a delicate grower—makes a slender tree. On the quince, which still more reduces the vigor and flow of sap, it has not enough vitality to make a handsome tree or produce good fruit. The strongest growing pear trees seem to do the best upon the quince. The Easter Buerre, Duchess and Winter Nellis have been proved to do well upon the quince. Such varieties of pear as make a good deal of sap wood on their own stalks will, by becoming dwarfed, produce fruit more prolifically and sometimes of better quality on the quince than on pear roots.

2. The only thing that will pay to graft into the white mulberry, so far as we know, is Downings ever-bearing variety. This makes a very nice fruit, as also a fair ornamental tree.

3. Although many orchardists might call the allowing of suckers to grow very slovenly, yet we believe it would be better than the close pruning that many of them give their trees. We know of some who rub off every bud and trim off every side shoot as if they were enemies instead of friends to the health of the tree. Our advice is, don't rub off a single bud from the trunk and lower limbs. Let every one grow; but keep them nipped or cut back so short that they do not get too much in the way. If a tree has its entire trunk sheltered by a growth of suckers and spurs it will grow all the healthier and stronger for it. We would encourage them to grow, and make fruit spurs from the ground up.

EXPERIENCE OF A BUSINESS MAN AS A FARMER.

Many men in business, vexed with cares and confinement, sigh for the freedom and independence of the farm. They have sometimes looked upon a cabin, with its smoke curling quietly up towards the heavens, and envied the occupants whom they fancy to be free from care and trouble, and they would almost sacrifice their luxuries for such quiet and like them

"Keep the noiseless tenor of their way."

They are apt greatly to over-estimate the profits of farming in the rather limited way that they propose to engage in it, for they intend to make it a sort of pastime. Many have tried the farm to find that they have only fled from one sort of trials to another, and the man of more muscle and more experience may smile at their complaints.

I take the liberty to extract from private letters of one who, rather late in life, has left active business engagements for the farm. He says:

"I have been very busy with my farm work, and, while at work, your remark came forcibly to my mind that 'a man working at farming has to do more work for a dollar than in any other business.' It is but a few bushels of potatoes that a man can dig in a day, and when dug they cannot be sold at any price at present. Now I am prepared to say that there is more disappointment in farming than in any other business on this earthy footstool, and any man who knows enough to lick molasses off a smooth stick had better never engage in farming. Cain, I believe, was the first farmer, and for his crime divine wrath has rested on farming ever since.

"In the first place, you have the fowls of the air, the beasts of the field, and all creeping things to destroy your crops. Secondly, you have the elements to contend with; if there is too much rain, or too little, your crops will be destroyed; and what seems to be the most provoking part of the whole thing is, that while you have been striving against all the above judgments, and your poor crops look withered or decayed, the worthless weeds by their side are green and flourishing, holding up their heads with rejoicing. Lastly, and finally, if by any chance you escape any or all of the above calamities and raise a good crop, then the price is down and you get nothing.

"Brother J., buy the ——; buy anything; get a clam hoe, and go on the top of Mt. Diablo and try to dig clams there, but don't buy a farm with the idea of ever making anything at farming. With me it was not so; when I bought my place I did not expect to make one cent —not a red—and I have succeeded so well that I have no reason to complain—feel very much encouraged."

SAN JOSE, February, 1876. C.

NEW AGRICULTURAL PATENTS.

Issued by the United States Patent Office from Jan. 11th, to Feb. 11th.

[Reported for the CALIFORNIA AGRICULTURIST by Louis Bagger & Co., Solicitors of Patents, Washington, D. C.]

Hay loaders—Jno A Bower, Eureka, Kansas.
Grain binders—C G Crouse, Sun Prairie, Wis.
Machines for untying bands on cotton bales—S H Gilman, New Orleans, La.
Machines for punching and shearing cotton bales—S H Gilman, New Orleans, La.
Cradle fingers for scythes—W Hamilton, Fallsburg, N Y.
Hand plows—M Y Thompson, Arkadelphia, Ark.
Machines for twisting hay or straw—Addison A Wells, Iowa Falls, Iowa.
Bean threshers and separators—C S Hall, Rochester, N Y.
Beater-reels for threshing machines—C S Hall, Rochester, N Y.
Horse-rakes—Wm J Lane, Millbrook, Port Chester, N Y.
Corn planters—A C Burgner, Charleston, Ill.
Horse-rakes—Orlando Clarke, Isaac Utter, Rockford, Ill.
Plows—Wm A Estes, Chevia, Mo.
Tooth fastenings for horse hay rakes—T A Gait, Sterling, Ill.
Corn planters—T A Galt, Sterling, Ill.
Apparatus for manufacturing fertilizers—H O P Lecoguay Puntin, near Paris, France.
Corn coverers—Thos B McChesney, Hamersville, Ohio.
Hand corn planters—Milton Pollock Koel, St Cloud, Minn.
Harrows—J Van Ortherick, Hillsdale, Mich.
Potato diggers—P M Bawtinhimer, Woodstock, Canada.
Bands for binding grain—David Olmsted, Minneapolis.
Grain binders—Wm R Baker, Chicago, Ill.
Harvesters—Peter Kline, Lisbon, Iowa.
Grain bags—C Lazarevitch, Brooklyn, N Y.
Plow points—W B Ready, Sacramento, Cal.
Harvester rakes—T H Bacon, Hannibal, Mo.
Machines for making grain conveyer flights—H I Chase, Peoria, Ill.
Harvesters—Jas B. Mohler, Pekin, Ill.
Harrows—Jas B Oakey, Indianapolis, Ind.
Harvesters—Wm F Coehrne, Lafayette, Ind.
Corn planters—Levi Scofield, Grand Haven, Mich.
Cutting apparatus for harvesters—Frederick H Wolschlaeger, Bensonville, Ill.
Churns—Eli F Beard, Republic, O.
Apparatus for steaming food for stock—R Dalley, Quincy, Mich.
Reaper reels—S Hamilton, Mount Sterling, Ill.
Cotton seed planters—J C Jenkins, Lebanon, Tenn.
Corn Planters—S P Babcock, Adrain, Mich.
Cultivator teeth—J C Bannigan, Umuleith, Ill.
Milk coolers—Langdon Clark, Crary's Mills, N Y.
Straw cutters—Levi Cossit, Guelph, Canada.
Plow handles—Wm A Crouch, Hannibal, Mo.
Gang plows—Enoch C Eaton, Pinckneyville, Ill.
Churns—D L Epperson, Mill Shoals, Ill.
Band cutters and feeders for threshing machines—G L Gearhart, Lebanon, Neb.
Bee hives—Wm B Hamilton, Glasgow, Ky.
Hay rakes and loaders—Geo Lambert, Hill Grove, O.
Fence posts—Lake Lightfoot, Walnut, Iowa.
Fence posts—Archibald Taylor, Keecketon, Va.
Combined land rollers and grass seeders—F M Dowling, Ida, Mich.
Corn planters—Sol F Holly, Rockford, Ill.
Processes of manufacturing fertilizers—L Stockbridge, Amherst, Mass.
Torsion springs for harvesters—R Dudley, Erie, Pa.
Grain Separators—Henry B Stevens, Buffalo, N Y.
Compositions for preserving eggs—Abigail S White, Chunchila, Ala.
Hay stackers—Moses Amidon, Lathrop, Mo.
Churns—Henry T Davis, Sherman, Tex.
Cutter bars for reapers and mowers—Thomas Henderson, Baltimore, Md.
Cotton seed Planters—Wm Jarrell, Humboldt Tenn.
Wheel cultivators—Benj W Reney, Brookville, Ind.
Harrows—Bardon W Taylor, Roseville, Cal.
Harvesters—Wm N Whitely, Springfield, O.
Harvester rakes—Wm N Whitely, Springfield, O.
Combined stack and feed cutters—Isaac S Wilson, Waldo, Mo.

A STUPENDOUS FRAUD.

Before our present Legislature put their hands into the people's pockets for twenty thousand dollars, or any other sum, wherewith to pay the debts of that gambling institution known as the State Agricultural Society, they ought to weigh well a few facts.

It has long been apparent to all who have given the subject a thought, that the State Agricultural Society, although a perpetual stipendiary upon the people's bounty, has been so conducted as to make every legitimate interest for the promotion of which such societies are supposed to be organized, tributary to and productive of that most seductive of all gambling games—pool-selling. As conclusive evidence of this fact we need but refer to the report of the Society for 1874. That year the Directors awarded to the horse-racing department, as premiums for speed, the sum of $16,330. Deduct ten per cent. entrance—$6,750—and the amount given outright for the encouragement of this species of agriculture(?) was $9,850. For other than racing money there was given that year to the horse department the additional sum of $2,315, making a net total for the horse of 11,895. We now consult the same report to see what was done to encourage the breeding of fine cattle, and find that the total amount of premiums awarded that year for all classes was the meager sum of $1,839!

The recent resignation of Col. Younger as a member of the Board of Directors of the Society leaves the entire southern portion of the State, south of San Francisco, without a representative in the Board. For the five years he had occupied a seat there he had earnestly endeavored to prevent the encroachments of the pool-selling interests upon the legitimate purposes of the Society. An extensive Short-horn breeder himself, he represented the great cattle interests of the State. He was one one of the largest exhibitors at the Fairs, and without his stock, together with that of such men as Ashburner, Emerson, Quinn, Clark, Jones, Carr, Boots, Hamilton and many others, all from this section of the State, our State Fairs would have have been very slim affairs indeed. The people had a right to expect, in view of the important industry he represented, some little consideration from the Society—the right to insist that horse-racing and pool-selling should not swallow up every other end and aim of the Society. But they found their representative in a hopeless minority of the Board, out-voted at every point. Hence, when the Society elected, a few weeks since, the editor of a horse-racing journal, whose business partner is at the head of the pool-selling evil of the State, to a Directorship, against his wishes and the wishes of all who had the best good of the Society at heart, Col. Younger thought he might as well quit. And so may the cattle men of this section of the country as well quit, and henceforth let the ring of blacklegs, into whose hands the Society has fallen, run it to their hearts' content.

Those who have never visited our State Fairs can have but a poor conception of the extent to which gambling is carried on in connection therewith. Thousands of the young men of the State are there brought face to face with a form of gambling more dangerous, because more enticing, than faro, roulette, or cut-throat monte. Respectable farmers, who never wagered a dollar in their lives at a horse-race, are found bidding at the pools. Under the guise of an agricultural or stock exhibition, the State becomes a "capper" for a stupendous system of gambling, "roping in" thousands to their ruin.

Isn't it about time that this condition of things ceased? Or, if it must continue, that the State withhold its countenance, and the Society be compelled to sail under its true colors and be known by its true name—"Society for the Promotion of Pool-selling."

We are aware that certain journals have intimated that Col. Younger's resignation is in keeping with the supposition that the southern stock breeders are moving to take the State Society away from Sacramento. We know that this is not true. Surely San Jose does not want it. We have a better society and more valuable property of our own. We would see the State Society remain where it is, but divested of the excrescences which have fastened themselves to it.

The foregoing from the San Jose *Mercury* is just about what we wanted to say upon this subject; only our own local Society needs as radical reforming as the State Society does. We are glad to see that a sentiment is growing in favor as to the right use of agricultural societies. Probably no paper in existence has labored for it more earnestly than the CALIFORNIA AGRICULTURIST, or been worse abused for such work. We believe in commencing this reform right at home.

SEEDS. SEEDS.

New Crop Just Arrived and New Shipments Continually Arriving.

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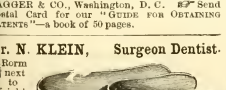

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1873

APRIL.

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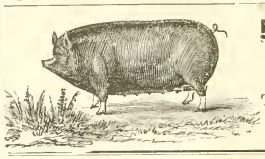

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The California Agriculturist

AND

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Vol. 7--No. 4.} SAN JOSE, CAL., APRIL, 1876. {SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

GENTEEL INTEMPERANCE.

A TALE OF OUR OWN TIMES.

BY NELL VAN.

"MAMMA," said Gertrude Dean to one of our staunch prohibitionist mothers, "can you imagine any evil that can consistently be called genteel?"

"Well, my dear, that depends upon circumstances," said the lady, with a puzzled look; "for instance, one might speak of a genteel dram shop with a degree of correctness to distinguish it from a low den where liquor is dealt out. Now a dram shop is in itself an unmitigated evil in any community—a plague-spot to contaminate the morals and pollute the very atmosphere to all within breathing distance. But, child, what prompted such an odd question? Of what were you thinking to suggest it?"

Gertrude frankly explained to her mother that, the afternoon previous, she and Fanny R. had sat next to a ministerial-looking gentleman, in a street car, who was conversing with a fine, benevolent-looking lady. "They spoke earnestly, mamma," said she, "and so loud that we became unintentional listeners and deeply interested in a remarkable story related by the lady. I can never forget the sorrowful expression of the old gentleman's face as he said, with a sigh, 'Alas! madam, it is but another example of genteel intemperance. We have plenty of such on every side, and it is the more lamentable because of our inability to prevent it.' He continued: 'the habitual drunkard can be dealt with by law, but this fashion of fostering drunkenness in the family circle, by offering hospitality with the wine cup, feeding invalids upon strengthening bitters and tonics, and drinking hot whisky punch to induce sleep, are all demoralizing in the extreme.' And, mamma, you should have seen the expression upon his countenance as he spoke—his hoary locks moving in the breeze and his eyes brightening with enthusiasm. I scarce ever saw a finer face, and both Fanny and I felt sorry to see them stop the car and go out, for we had been so much interested in them both."

It was now Mrs. Dean's turn to speak, and glad was she to remind her usually giddy daughter of the terrible evil which fashion had placed at our very doors to combat.

"On every side, my dear," said she, "we find men and women, and children even, either battling with or yielding to temptation in the wine-cup. Frequently the taste for liquor is inherited, and more frequently fostered by the habit of ignorant and unprincipled nurses feeding young babes either soothing syrup or gin-sling to keep them quiet. Upon the young women of to-day, my dear, rests a great responsibility—that of using your influence towards crushing out this hydra-headed monster. If more of our young girls were as firm in their convictions of right as my school-mate and friend, Amy Stanhope, much good might be accomplished. You've heard me speak of Amy, my dear. She passed through town a few years ago, with her husband, on their way to Japan, where he has been to establish a Christian mission. She was a girl of unusual power. Her youth had been spent where she had become familiar with the devastating results of intemperate habits, and upon every occasion she would read a lecture to the young men who hovered about her because of their fondness for wine. Young Oscar Metcalf was one of her chief admirers. He was the only son of a wealthy merchant who had spared no pains to give him a fine college education. At that time Oscar was a splendid-looking youth, generous to a fault, and the admiration of all the young women of the village when he spent his vacations at home, where he formed the acquaintance of Amy, who was spending a few weeks with his sisters. Like all the young men of the time, he had formed the very *respectable* habit of wine-drinking, and more than once had he remarked the sad expression and quivering lip of Amy while listening to his recitals of the lively times he and his college chums enjoyed together at the festive board. Occasionally a gentle remonstrance would fall from her lips, and she would tell him how disgusting the habits of smoking and drinking were to any right-minded young lady, that she pitied the one who became his wife, if he did not mend his ways, to all of which he replied in an off-hand way; but the truth of her arguments would rankle in his heart and destroy, for the time, his peace of mind, for he was madly in love with Amy, and desired to please her that he might win her for his own.

"In those days I was more thoughtless than she, and cared less for the future than for the glorious present. How well I remember taunting Amy with the remark that she would lose her lover with her reproachful talk, and that it was well enough for old folks and spinsters to preach temperance, but to one of her youth and good looks, she should take the world as she found it, for young folks would be young folks, and wine-drinking and smoking was a fashion among men which it was simply impossible to disturb. Such talk aroused Amy to use her influence upon me, and many interesting conversations we held together upon the subject, till I grew to love the girl for her strong principles and desire to influence all within her reach to do right, because it was right, regardless of fashion or custom.

"She afterwards made me a long visit, and I became conscious of the fact that she really loved the wild, harem-skarem Oscar, and desired above everything to save him from the ruin which seemed inevitable. She had won his affection and esteem and hoped to be able to shield him from the enemy.

"One evening we all stood on the moon-lit porch, where climbing vines filled the air with perfume. Her brother and mine, young Oscar, Amy and I had been talking over a grand party which we had all attended. Amy, as usual, deprecating the habit of the young men's frequent visits to the wine room, and, stamping her foot to give emphasis to her words, she said, decisively, 'I'll never marry a man who cannot find sufficient enjoyment in the society of his friends and the dance, without seeking outside stimulants.'

"'Tut, tut, little one,' said her brother, laughing; 'I dare say Oscar here will take wine at parties all the days of his life, notwithstanding his partiality for you—which he does not try to deny—and you never would try to coerce so clever a fellow as he is now, when he pays you the highest compliment a young man can pay a lady. Don't be too severe upon us young fellows with your strict ideas of propriety which belong to a past generation.'"

"And what did she say to that, mamma?" said Gertrude, with animation.

"Well," continued Mrs. Dean, "she turned upon him, with her large, brown eyes full of earnestness, and drawing herself up with indignation, she said, impressively, "George, I know a young lady—who shall be nameless, for she is very dear to your heart—who, to enhance the beauty of her complexion, is slowly poisoning herself with arsenic! She has not acquired the habit thoughtlessly for social indulgence, but to gratify a desire for the admiration of the world and the envy of a few of her own sex. Would you, in your sound senses, lead that young woman to the altar to become your wife, even though you loved each other to distraction, without attempting to awaken her to a sense of her danger and urging her to denounce the habit? Now, this wine-drinking, being a social habit, is much more disastrous in its results; for it does not necessarily kill its victim, but leads on to ruin no end to the number of participants. Henceforth, George, go your way, and let me go mine. Marry your transparent faced beauty and have her to bury; but I'll live the life of a spinster and deprecate the small vices of men to my dying day before I'll succumb and entail upon future generations a disgraceful inheritance.'

"Not a word was spoken in reply, and, Gertrude, those words sank deeply into the hearts of more than one of her hearers, as I afterwards learned."

"And did she marry Oscar, mamma?"

"No, child. He sat moody and uneasy the whole evening after we went in-doors, and before leaving had a long conversation with Amy, which made him renounce forever all claim to her hand.

"He found he must choose between the life he then led and a future with a new state of things. She year of trial she demanded before a final answer could be given was more than his weak nature could stand. They met for a time only as friends, and then as Amy was lost to him forever, he became reckless, and died as he had lived, a victim to what might be called "genteel intemperance." His passion for the cup was already stronger than his love for this pure girl. She had a lucky escape from a fate worse than any that can befall a noble woman—a sensual, selfish, drunken husband.

POOL-SELLERS AND AGRICULTURAL FAIRS.

Our Legislators will do one good work if they succeed in classing pool-selling as gambling, and subject it to the severest penalty of the law. We have had enough of it, and sufficient of its evil effects. Pool-selling is gambling—and pool-sellers are no better than any other class of gamblers. It is the most dangerous of all gambling; the most demoralizing, exciting, enticing, and therefore the most dangerous to the morals of a community. If pool-sellers are allowed to ply their avocations, why not license, or remove restraint from all other species of gambling? The power of pool-selling is felt all over the State, and wherever it is allowed. There are rings of pool-sellers who control State and county agricultural societies. They do not foster agriculture, or in the least benefit it; but agriculture is made to serve pool-selling, and whatever industrial interests are drawn together at fairs are controlled by the pool-sellers are a sort of breast-work and shield behind which they are sheltered. As a general thing, the presidents and directors of State and county agricultural societies are elected by the pool-sellers. Whom they oppose cannot be elected. The pool-sellers make up the boards, the speed programmes, the pool privileges. They match the horses so as to produce the largest sales of pools. They influence the boards to give twice as much for horse-racing as for all other exhibits. Pool-selling is chargeable with all the disgraceful conduct of drivers. They so manipulate the races as to rob the dupes who buy their pools and bet at races. They monopolize half the day at fairs, to the exclusion of all honest interests. We say, as we have heard dozens of honest farmers say, if all this horse-race gambling is to be forced upon us, and we cannot rid ourselves of it, let the fairs go down—the sooner the better. The public demand that pool-selling shall not be allowed at our State and county fairs. Pool-sellers have had control of fairs long enough. In place of our fairs fostering gambling, drunkenness, reckless profanity, extravagance and immorality, it is time that they be devoted to advancing material interests of honest producers, and fostering the virtues of our wives, sons and daughters.

Since 1854, the State has given the State Agricultural Society $118,000, and it has so managed, with all its vast patronage, as to be now some $16,000 in debt. The State Society is now praying to the Legislature for relief. Within the past three years the State board has given the horse, in purses and premiums, $52,592. For entrance to these purses they have, for the same, $21,071. Amount of all premiums paid for other purposes during the years 1873 and 1874 (excepting medals and diplomas), only $12,530. These figures, compiled from the transactions of the State Agricultural Society, will tend to show what interest is fostered by "State aid."

The pool-sellers take a percentage of

all money thrown into their game, the same as monte and faro banks do, the winner to pay the percentage to the game. Of the tens of thousands of dollars that go into pools over and over again during several weeks of horse-racing, how much, think you, is lodged in the game? What a convenience for these gamblers to be made respectable by law, and be subsidised by the State, and be allowed to virtually control the the fairs which are ostensibly held in the interests of agriculture and its kindred industries! How nice to be patronized by gaiety and beauty! How flattering must it be to a gambler's profession to be able to draw to its support the presence, and the dollars and dimes, of gentlemen and ladies, and boys and girls who walk in the highest strata of society!

In New York, Illinois and Wisconsin, we believe, pool-selling or other gambling is not allowed at agricultural fairs. In Canada no horse-racing is allowed within five miles of any place where a fair is being held, during the time of the fair. The testimony of our exchanges is all one way, that where there is no horse-racing there are better and more successful fairs. In Canada their agricultural fairs are probably the best supported by attendance of the people and by exhibitors of any fairs in America. Where the industrial interests alone are fostered, the fairs have better success financially than do fairs where horse-racing is fostered. And it requires no very deep reasoning to see that the grand results of fairs conducted to benefit industry must be vastly more profitable to the people.

We hope our legislators will favor the best interests of the people, and throw pool-selling where the gambling is deposited—on the criminal list.

We have never opposed the exhibition of horses. All of their desirable qualities should be shown—their strength, speed, action, stepping, walking, training, etc., to the best advantage. We believe that our fairs might be grand exhibitions of everything worthy included in the list of products of a civilized people. We much desire to see them become such, and hope our Legislators will subsidize no societies or fairs that include pool-selling, liquor-selling and other demoralizing practices in their exhibitions.

WIDE WAGON-TIRE BILL.

Santa Clara county has been provided with a law, by our present Legislature, to regulate the width of wagon-tires. This has been enacted to prevent loaded teams from cutting the roads to pieces. The expense of changing the felloes and tires of wheels will be considerable—a heavy tax upon many persons in the start, but the benefit in preserving roads will probably, eventually, pay, and when once established will be a good rule to follow.

Here is the act, in substance, as approved: All wagons used on public roads in this county, or wagons of any other county, used in this for habitual teaming, shall have tires as follows: If the axle in its vertical diameter be one and a half inches, the tire shall be two and a half inches wide; if one and three-fourths inches, three inches wide; if two inches, three and a half inches wide; if two and one-fourth inches, four inches wide; if two and a half inches, four and a half inches wide; if over two and a half inches, five inches wide. Or, if the axle be of wood, then the tire shall be as follows: For wagons constructed to carry one and a half tons burden, the tire shall be two and a half inches wide; if to carry two tons, the tire shall be three inches wide; if two and a half tons, three and one fourth inches wide; if three tons, three and a half inches wide; if four tons, four and a half inches, and all over five tons the tire must be five inches wide. This act takes effect after the first of May, 1878.

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$1.50 Per Annum.

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S. HARRIS HERRING, Editor.

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☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

E. M. Bishop & Co., who have lately gotten up a fine directory of San Francisco, are at work vigorously on one for San Jose. We judge by the pains they are taking that it will be a most complete affair, and a really reliable guide.

The Archer Railroad Bill was calculated to regulate the price of fares and freights on railroads in an equitable manner, allowing ample compensation to railroad companies. The Assembly passed it—the Senate Committee reported adversely. If this means defeat, it also means that *the railroads own the people.*

Retrograding.—The State Legislature has repealed the laws providing for the schooling every child, called the compulsory education law; also, the law allowing women to hold public educational offices. Either there is something radically wrong in our system of law-making, or else in the law makers themselves. At any rate, whoever looks for acts superior to the mental and moral calibre of our representatives will evidently be disappointed all the time.

Several fine contributions are held over for our next issue, and some departments are left out for want of room this month.

Premiums.—Any subscriber who has ordered books or chromos from this office, and has not received the same, will confer a favor by at once notifying the publishes that the matter may be attended to. Mistakes will sometimes occur. Letters and articles sent do not always reach the proper destination. It will cost only one cent to drop us a card. We design that every one shall get what he is entitled to without fail.

The local rain fall for the season, up to the middle of March is 19.8 inches. This is the exact measurement kept by Mr. Ethell at the San Jose Bank building. After the most stormy winter ever known on this coast, the weather cleared up on the 13th ult. with a fair promise of fine weather. But, as the longer we live here the less we know about what will follow, we will not venture to prophesy.

A Sample.—Those Legislators who advocate the bill compelling publishers of newspapers, etc., to append the name of the writer to each article published, are probably very wise and efficient representatives, in their own estimation; but if the exact estimate in which they are held by their constituents generally could, by any possible means, be comprehended by their immense intellects, they would have reason to "bag their heads."

(Signed),
S. HARRIS HERRING.

The visit of Dr. Mary E. Walker to this coast, and her lectures to the people, have made for her many warm friends amongst the better classes. She ventured to give expression to many wholesome truths, which were obnoxious only to such as were viciously inclined. In defense of honest marriage, of virtue and morality she uttered noble and feeling sentiments; while the way she handled libertinism, free-loveism, and the bad generally, was a caution to youthful looseness and gray-headed reprobates. The doctor's talks are calculated to make whoever hears them, hold purity in a higher estimation and despare wickedness with a deeper contempt.

McCall's Road Grader is certainly a very superior implement. It is so constructed as to be completely under the control of the manager, upon side-hill or level ground, in heavy or light work. The wheels are set on crooked axles that can be turned to any degree of pressure against the furrow-lifter, with a lever and coupling ratchet. It will work right or left with equal facility, and at any angle to suit light or heavy, hard or soft ground. The scraper is swung to a turn-table resting upon the running gear, the whole weight of which can be thrown upon it at will. A neater, or more admirably constructed device adapted to its work, it is hard to imagine.

There are three of these McCall graders now at work upon the Mount Hamilton road, doing each the work of over fifty men with ordinary scrapers. By the way, the construction of the Mount Hamilton road is being pushed with vigor, nearly all the men employed being white men—not Chinamen. This we are glad to notice, as there are hundreds of our own race who really need the work, and to send to China for a road which can be made at home would not be true economy.

Sheep and Goats.

ANGORA PROFITS—A FEW FIGURES ABOUT MOHAIR.

It has been asserted by some outside parties that there was no profit in Angora goats' fleece—that sheep's wool will pay much better than mohair. Until lately the owners of Angoras have not been able to fully refute the charges, owing to the fact that the low grades, brought from common goats, would not prove anything. Now that there are many high, and more pure-bred Angora goats than formerly, facts and figures are abundant to show that there is profit in breeding for the mohair.

We can present figures from three different breeders: Mr. C. P. Bailey, of San Jose; Stockton & Buffin, of Hornitas, and Mr. Gilmore, of El Dorado. Mr. Bailey weighed several of his best pure-bred fleeces, which ran as follows: Buck Romeo 2d, five years old, eleven months' growth of fleece, 8½ lbs; a two-year-old buck, one year's fleece, 7½ lbs; ewe, Scotch Woman, six years old, twelve months' fleece, 6½ lbs; ewe, Queen of Monterey, three years old, twelve months' fleece, 6 lbs; ewe, two years old, 5¼ lbs. The above fleeces are worth $1 per lb, net. From a flock of 1,000 young goats, one and two years old, were sheared 1,600 pounds. These were grades from 7-8ths to 31-32ds, and the fleece will average worth 60 cents per pound. Mr. Bailey says that he can get as good results from 31-32ds and 63-64ths as from pure-breds. Soon there will be many such, as the high-breds are increasing wonderfully fast now.

From a private letter written to Mr. C. P. Bailey, of San Jose, we are permitted to take the following facts and figures of Messrs. Stockton & Buffum's flock: They commenced grading up from the common goat and grade bucks, 15-16ths and 31-33ds, in the year 1864. The bucks were purchased in Ohio and driven across the plains by Thomas Brock, from whom they obtained their stock. These and similar grades were used a few years, when they obtained pure-breds, and have used nothing but pure-breeds since. Owing to a limited range, they have but a small flock. They have readily sold their surplus stock for fair prices, always carefully selecting and keeping the best goats for breedess. Their flock now consists of 550 head, of this number 36 are pure-breeds and the balance grades from 7-8ths to 127-128ths. Last year they shipped 1,500 pounds of mohair to New York (being the clip for two years) and sold it for 85 cents per pound, unassorted. They have a better clip this year, and expect a good price for it.

Messrs. Stockton & Buffum send figures of forty fleeces weighed separately. One pure-bred ewe sheared 7 lbs; one 31-32ds ewe's fleece weighed 7 lbs; a 15-16ths ewe sheared 6¼ lbs; a 7-8ths ewe sheared 4¼ lbs; five 7-8ths ewes sheared 18⅜ lbs; three 15-16ths sheared 17¼ lbs; two 31-32ds ewes sheared 13¾ lbs; four pure-bred ewes sheared 25¼ lbs. One of their pure-bred bucks sheared 7½ lbs, and a pure-bred buck kid 3⅛ lbs, while a grade kid sheared 4¼ lbs; twelve kids sheared 39 lbs of fine mohair; three pure-bred bucks sheared 20 lbs. But the most remarkable fleeces were the wethers'. One wether sheared 9¼ lbs! ten wethers sheared 76 lbs of fine mohair. We must make special mention of the produce of wethers. Evidently they will make the best mohair. The expenditure of vital

force incident to breeding, caring for, and nursing the young, detracts from the fleece production of breeding animals. The wethers keep in more uniform and better order on the same feed, and their fleece is not only fine and heavy, but uniform in texture during its growth the entire year.

About Stockton & Buffum's management, we learn that they drive their flocks to the mountains during the summer, where the animals have at once the advantage of a cooler atmosphere and greener feed, which conditions are favorable to fleece growing and the general growth of the goat. These gentlemen have this season sheared some 2,000 pounds, which is probably the largest shearing ever made in our State by any one breeder in a single season.

The Gilmore Angora Goat Breeding Association has made a report, and gave weights of best fleeces 6½ pounds ranging to 4 pounds. The entire fleece, we understand, was about 1,600 pounds, from some 2,000 goats. Of course, many low grades did not shear much, if any, mohair. This association claims, we believe, some 4,000 acres of land near Shingle Springs, and about 10,000 acres near lake Tahoe. The association also claims to represent some $350,000 in capital. Also, that it designs bringing to this State a large flock of pure-breds from Asia, soon. The breeders of goats in the State are anxiously awaiting the advent of this fresh supply.

The San Francisco *Chronicle* says: "Little pure mohair has been marketed as yet, because it is too costly an undertaking to import both bucks and ewes with which to stock the State, but the more expedient and slow method has been adopted of crossing pure bucks upon our native ewes. These half-breeds in turn will be bred to imported bucks, and as these animals breed so often, it will only be a few years at most until we shall have a stock of high-grades which will be so near thoroughbred that the difference cannot be distinguished, and producing a quality of mohair equal to that of the pure-blood animals. In a few years there will be goats enough in this State and in Oregon and Nevada to justify the building of a factory on this coast to work up the mohair, and when that event happens there will be profit in the business."

L. H. Gaskill writes from Campo, San Diego county, to the *Rural Press* as follows:

"I have been the Angora goat business only two years, and I think that it will not be long before it will supersede the sheep business, for several reasons. The goats do not need as fine quality of food as sheep. They will live entirely in the mountains, subsisting upon the browse of this lower county. I have a band of 600 and they range in the mountains all the time. I was afraid that they would pull out their wool, but they are as careful about that as a person would be about pulling his hair. The mohair I have worked right at home, the women work it the same as wool, into yarn, and knit it into socks and stockings. It is the old-fashioned style, but a very economical way of putting in long evenings. They work it by hand. It would be much better if there was some machinery for carding and spinning it into yarn; then they could afford to knit it very well and make it profitable to the manufacturer and the consumer. These socks sell from seventy-five cents to one dollar a pair, when you can get sheep'e wool for three to four bits for a pair made in the same way. One pair of mohair socks will last as long as four pairs of wool. They are more elastic, and the fiber is so long that the yarn is as strong as hemp twine, and very soft and white. I hope to hear from some other experimenters with the mohair."

In previous articles, we have written up other advantages and profits of this industry. There is no doubt in our mind that the Angora goat will yet be admitted to be the most profitable fleece-producing animal, and will discount the best breeds of sheep.

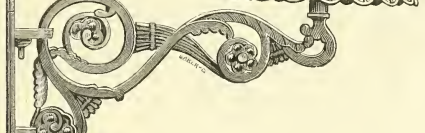
Poetry.

The Farmer.

Of all pursuits by men invented
The plowman is the best contented,
His calling's good, his profit high,
And on his labors all rely.
Industrious plans by him are laid;
Mechanics all by him are fed:
His hand gives meat to everythin,
Up from the beggar to the king.

The milk and honey, corn and wheat,
Are by his labors made comple;
Our clothes from him doth first arise,
To deck the lofty or dress the wise.
We, then, by vote, may justly stats
The plowman ranks among the great;
More independent than they all
That dwell upon this earthly ball.

All hail ye farmers, young and old,
Push on your plow and courage bold;
Your wealth arises through the clod,
Your independence from your God.
Hi, then, the plow supports the nation,
And men of rank in every station,
Let kings to farmers make a bow,
And every man procure a plow.



ORNAMENTAL WINDOW FLOWER BRACKET.

William Brown, of Oregon.

AFTER JOAQUIN MILLER.

They call him Bill, the hired man,
And she they call her Mary Jane;
And lovers often drew a rein
To chat and sigh as lovers can
Across the gate in snatch and catch;
And women winked across their tea,
And said, and truly so thought he,
That she would make a splendid match.

The hired man had loved her long,
Had loved her best and first and last;
Her very garments as she passed
For him had symphony and song.
So when one day, with brow arown,
She called him Bill, he raised his head,
He caught her eye, then faltering said:
"I love you, and my name is Brown."

She fairly waltzed with rage; she wept;
You would have thought the house a-fire;
She told her sire, the portly squire,
Then smelt her smelling salts and slept.
Poor William did what could be done—
He swung a pistol on each hip,
He gathered up a great ox-whip
And drove towards the setting sun.

He crossed the great backbone of earth;
He saw the snowy mountains rolled
Like mighty billows, saw the gold
Of awful sunsets, saw the birth
Of sudden dawn upon the plain,
And every eve found William Brown
Eat pork and beans, and then lie down
And dream sweet dreams of Mary Jane.

* * * * * * *

The teeter board of life goes up,
The teeter board of life goes down;
The sweetest face must learn to frown;
The biggest dog has been a pup.
Her lovers passed. Wolves hunt in packs.
They sought for bigger game. Somehow
They seemed to sea about her brow
The forky sign of turkey tracks.

At last she nursed a new desire;
She sighed, she wept for William Brown,
She watched the splendid sun go down
Like some great sailing ship a-fire;
Then rose and checked her trunks right on,
And in the cars she lunched and lunched,
And had her ticket punched and punched,
Until she came to Oregon.

She wore blue specks upon her nose,
She reached the limit of the lines,
And then set out to reach the mines,
In rather short and manly clothes;
Her right hand held a parasol,
Her pocket held a testament,
And thus equipped right on she went—
Went waterproof and waterfall.

She asked a miner gazing down,
Slow stirring something with a spoon,
To tell her true and tell her soon
What had become of William Brown.
He looked askance beneath her specs,
Then stirred his cocktail round and round,
Then raised his head and sighed profound,
And said, "He's handed in his checks."

Then cars fed on her damaged cheek,
And she grew faint, did Mary Jane,
And smelt her smelling salts in vain.
Yet wandered on wayworn and weak,
Until at last she set her down
Upon a sloping hill alone;
And there, good gracious! stood a stone,
And lo! that stone read—William Brown.

"O William Brown! O William Brown!
And here you rest at last," she said,
"With this lone stone above your head,
And forty miles from any town.
I will plant cypress trees, I will,
And I will build a fence around,
And I will fertilize the ground
With tears enough to run a mill."

She went and got a hired man,
She brought him forty miles from town;
Then in the tall grass she sat down,
And bade him build as she should plan.
But Digger herders, with their bands,
They saw and hurriedly they ran
And told a bearded cattle-man
That some one builded on his lands.

He took a rifle from the rack,
He girt him in his battle-belt,
He thrust two pistols in his belt,
Then mounted on his charger's back,
And plunged ahead. But when they showed
A woman there, about his eyes
He pulled his hat, and he like-wise
Pulled at his beard, and chewed and chewed.

At last he got him down and spake:
"O, lady, dear, what do you here?"
"I build a tomb for my own dear,
I plant some flowers for his sake."
The bearded man threw his two hands
Above his head, then brought them down,
And cried, "O, I am William Brown,
And this the corner of my lands."

Her specks fell off, her head fell back,
Some like a lifted teapot lid;
She screamed—this ancient maiden did—
Then, fainting, split herself, slack!
Right in the heart of William Brown.
Then all the Diggers were amazed.
They thought the lonely maiden crazed,
And circling there, they squatted down.

* * * * * * *

The preacher rode a spotted mare;
He galloped forty miles or more;
He vowed he never had before
Seen bride or bridegroom half so fair.
And all the miners, they came down,
And feasted as the night advanced,
And all the Diggers drank and danced,
And cried, "Big Injin, Willirm Brown."

Up to the date of our going to press, the season is remarkably promising for a large fruit crop, as well as for grain, hay and vegetation generally. If we have no heavy, late frosts, all is well.

City Gardening.

Spring Flowers.

Oh! dainty baby foresters,
That hide in silent nooks,
That linger by the cow-paths,
And peep into the brooks,
To me you are the warders
Of the realm of Long Ago,
At whose soft beck unnumbered forms
Like shadows come and go.

By mossy rocks and nodding ferns
You lift your timid eyes,
And by the wounded maple tree
In smiling groups arise.
No more the shrieking winter winds
Affright the naked woods,
But all the scented aisles are gay
With Flora's dappled hoods.

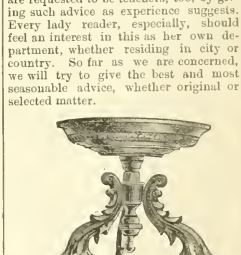
Though years have sped since first for me
You made the meadows bright,
And many a sunset-tinted dream
Has faded into night,
Still do I hail with boyish love
The violets' sweet perfume—
Still joy to see the crocus burst
Like Lazarus from the tomb.

I thrill to see the buds again
Upon the apple tree,
Where every branch is eloquent
Of glories yet to be;
Where soon the winged Argonauts,
From lands beyond the main,
Will sing their merry love-songs,
And build their homes again.

Trace the tints of deathless Hope,
Sweet flowers, in all your beauty;
You come as meek interpreters
Of man's exalted duty.
You whisper of a dawning heaven
Beneath us as above,
When earth shall melt with poetry,
And man be full of love.

CULTIVATING FLOWERS.

THERE is so much that needs to be said, and that should be said, under this department, that we are almost puzzled where to begin or leave off. But as we cannot get it all into one paper, and as it is necessary, to be a successful gardener, that one should learn well what he or she does learn, it may be well to give short lessons, and request each reader to commit to memory and to practice, each month, as much of it as possible. We can all be pupils, and all are requested to be teachers, too, by giving such advice as experience suggests. Every lady reader, especially, should feel an interest in this as her own department, whether residing in city or country. So far as we are concerned, we will try to give the best and most seasonable advice, whether original or selected matter.



HOW TO DESTRY PLANT LICE.

A lady subscriber near Virvinia City wants to know how to destroy lice *(aphids)* on house plants. It can be done by fumigating with tobacco smoke, also by dusting fine snuff upon them. To fumigate, place your plants in a small room, or into a large dry goods box where they can be closed from outside air; then upon live coals, or a hot stove cover, drop pulverized tobacco, and close the entrance for several minutes. The

smoke will kill the insects without injuring the plants unless they are exposed to the fumes over fifteen minutes. Hot water will kill insects. A single, quick plunge into, or pouring of hot water upon plants, will kill all aphids without killing the plants. The insects get under as well as upon the leaves, and must be reached, whatever the means used to destroy them. A drop of carbolic acid in a wine glass of water will kill aphids if put upon them.

These lice are hatched from eggs that a small fly, the size of a gnat, with long wings, lays upon the plants. Once killing of them may not last forever, as more eggs may be laid and another crop soon grow. But keep at them. They are mortal, and will succumb to persistent treatment, generation after generation.

Illustrations.—We present a picture of an ornamental, hinged, metalic window bracket, and also another of an elegant single flower-pot stand, to set upon a shelf or table. These convenient and beautiful articles we see for sale at Mr. T. W. Mitchell's floral depot, in San Jose, who sells a variety of ornamental flower furniture at low prices. They will also suggest to the reader rustic work that can be constructed at home, out of such materials as can be obtained in the vicinity of most homes. A thousand things can be made to beautify the home, by the exercise of a little ingenuity.

Window Gardening.—It may be beyond the reach of a good many to possess a greenhouse, says an experenced gardener, but there is no one but may have a few plants in the window. The culture of plants has a weighty moral influence upon those who indulge in it for the love of it. In fact, a study of nature in any of her varied forms leads the mind away from that which is ignoble to that which ennobles it. Especially is this the case with the young, and it should be the aim of every head of a household to bring the younger members under the influence of whatever teaches morality, and helps to direct the intellectual abilities in a legitimate channel. A study of nature, therefore, as she exhibits herself in the floral world, is within the reach of nearly all; and every one possessing the convenience should endeavor to cultivate a few plants for the sake of amusement, as well as to help make home attractive for the younger members of the household

That the plants be in good healthy condition, is really more needful with regard to what is required for the window than for the greenhouse. In the window, although the atmosphere is suitable for plants to continue to flower and keep in health, if in good health when put in, yet it is difficult to revive into luxuriant health when sickness has ruined the constitution. In the genial atmosphere of the greenhouse, a sick plant *may* be brought into good health again. Therefore, for the house, get small but healthy plants. Large plants soon fill the space allotted for them, and have not room for freedom of growth, and look miserable. Small ones, in healthy condition, give the owner considerable pleasure in seeing them grow, and also do best. Large plants cannot be grown very satisfactorily where they get insufficient light, and enough cannot be given them when hampered in a small place. A window with a southern or eastern aspect is considered the most suitable. Keeping the glass in the window clean has often a good effect on the plants. In hot, sunny days in summer, a thin muslin between the sun and plants will prevent scorching and drying of foliage. Careful washing of the leaves cleans off all dust which may accumulate upon them.

When it is necessary to repot plants, do so with care. Destroy the roots as little as possible; after placing the drainage, then as much soil as will raise the base of the plant so high that about an inch will be left from the surface of the roots to the rim of the pot. Use a narrow strip of wood to press the soil between the roots and the side of the pot, taking care that no empty spaces are left around the roots, especially if it is a hard wooded plant. If empty spaces are left when potting it is very difficult to tell when the plant is dry, as it has always an empty and dry sound even when saturated with water. When pots are kept in saucers in windows, do not allow much, if any, water to remain in them long after watering the plant. Never water the plant by putting the water into the saucers, but water always at the surface of the pot, and allow it to drain through the roots, which is the far superior and more natural way. Plants allowed to remain in stagnant water get so saturated that their health is soon destroyed.

Testing Seeds.—All seeds should be tested before planting, especially all small seeds, which can be done in simple ways. One way is to take a saucer and fill it with white sand, and then fill it with enough water to wet the sand and keep it so, place the seed on the wet sand pressing it gently into it so that the seed is about half way imbedded into the sand and set the saucer in a light, warm room, in the sunlight.

Another plan is to take two thicknesses of woolen cloth—either flannel or fulled cloth will answer. Dampen them with water, and lay them in some shallow dish, as a plate or saucer. Then sprinkle a few seeds on them, being careful not to spread the seeds so thick that one will lay upon the other. Now dampen another piece of cloth and lay over the seeds. Keep the plate or saucer in a moderate warm place, and by removing the upper cloth at will you can watch the result. The good seed will gradually swell and finally sprout, while the seed that is too old, or that is bad from any other cause, may swell at first, but, instead of growing like the good will mold and rot.

Still another way: Take a wide-mouthed, clear glass bottle nearly full of clear water, and take lint cotton and mix the seed through it and lay the cotton, after being moistened, on the water. This plan has the advantage of keeping the seed in a uniform moisture until it germinates. The bottle should be placed in a light room, where the sun can reach it. Seeds will germinate in from 24 hours to 10 days, governed by the kind, size and age of the seed and the warmth of the room. The seed being exposed to view can be watched as their daily progress, which will furnish a very interesting study to both old and young.

Planting Seeds.—If seeds are planted too deep, they either rot in the damp, cold earth, for the want of warmth necessary to their germination, or after germination, perish before the tender shoots can reach the sun and air; and thus that which was designed for their nourishment proves their grave. Sand, sawdust, vegetable mould or some light material should be used to cover seeds. Then the soil should be kept gently and regularly moist until they are well started.

Warmth and moisture are necessary to the germination of seeds. Neither of these will do alone. Seeds may be kept in a warm, dry room, in dry sand or earth, and they will not grow. They may be placed in damp earth, and kept in a low temperature, and they will most likely rot, though some seeds will remain dormant a long time under these circumstances. But place them in moist, warm earth, and they will commence growth at once,

After seeds are nicely started, the plants three inches high may be transplanted with a trowel, with the earth about the roots.

Roof Gardening. — Roof gardening has, in Chicago, one very admirable illustration in the case of a hotel. On the roof of the first story is a court, opening outward to the south. Above this, on three sides, in a circular style, run three more stories. This court or roof is simply a garden. The tiles are set over with vases, and these during summer are filled with gorgeous bloom. A hundred windows look out upon this loveliness, and from the second floor persons can walk out for a pleasant promenade. The designer and owner, Mr. Phinney, tells me the thought came to him while on shipboard crossing the Atlantic, and he hastened to put it into form. Of course the whole establishment becomes a family. The ordinary hotel barrenness is an impossibility. A gorgeous display of gilt and fresco is displaced by nature's adornment. That kind of refinement arises which can come only from a fusion of city and country life. Cottage hotels in the smaller cities, such as the Dwight house on the old Dickinson place at Binghampton, surrounded with parks, fountains and flowers, are an easier possibility. Indeed it seems strange that they are not more general; but here is a garden home, for the first time in America, embedded for the public in the heart of a vast city.—*E. P. P., in Gardeners' Monthly.*

Window Plants.—A writer for the *Scientific Farmer*, who professes to know all about it, says that according to the temperature required for the healthy growth of different plants, they may be divided into two classes, namely: Those that grow well at an average temperature of 50 degrees, that is, ranging from 40 to 60 degrees, and these that require a higher temperature, an average of 60 degrees, ranging from 50 to 70 degrees.

The first class will include geraniums, carnations, centaureas, camellias, azaleas, abutilons, ageratums, callas, sweet alyssum, English ivies, smilax, mignonette, hyacinths, palmudas, stevias, petunias, verbenas, lobelias, and roses. In the second class are begonias, bouvardias, epiphyllums, cacti, fuchsias, gloxinias, German ivies, heliotrope, pileas, zorrenias, and roses. Roses are included in both lists, as they will succeed under either conditions.

Plants grow much better where the temperature runs lower at night than during the day. It never should go below 40 degrees in the first case, or below 50 degrees in the second case.

Look to Your Axles. — How many horses suffer by the want of attention to the axles of carts and wagons. We often see the wheels running at an angle ten or fifteen degrees "out of true," the teamster seeming not to realize how much this increases the burden. If the wheel will only revolve, it seems all that is needed by the thoughtless driver. Then, again, want of care in greasing the wheels is another source of unnecessary labor for the horses. It is only fair, that while we require reasonable labor from our animals, we shall grant them reasonable facilities for doing it.

A YOUNG MAN ASKS ABOUT THE STOCK BUSINESS.

New York, Feb. 11, 1876.

Ed. Agriculturist and Live Stock Journal: *Dear Sir*—I hope you will pardon the liberty I take in addressing you, but I desire some information and do not know who else to apply to.

Having a desire to go to Southern California and engage in stock raising, I wish to know what chance there is for a strong, healthy young man. I would like to engage myself to some large stock grower, learn the business thoroughly, and, as soon as possible, start in business for myself. Can you give me any necessary information?

Very truly, yours,
Horace M. King.

Remarks: As Mr. K. has not intimated what kind of stock raising he wishes to engage in, we hardly know what answer to make. The old way of cattle-breeding on a thousand hills—wild stock with wild vaqueros to herd them over hundreds of leagues of land, is drawing to a close. As the country gets settled up, a more civilized and better system is being adopted. There is abundant room for introducing the better breeds of all kinds of stock. It will require some money to get land, and time to accomplish much, but there is no surer business if properly conducted. But do not entertain an idea that your services will be valued by such men as adhere to the old style of cattle and sheep husbandry. All they want is a wide, free range, and Mexican herdsmen mounted upon bronco mustangs—a half-civilized condition and business. We request such of our readers as may know of any opening, or as can give information or encouragement, to write to Mr. King.

BENTLEY'S HOT-AIR FURNACE FOR DRYING FRUIT.

Dr. G. J. Bentley, of Michigan City, Ind., who has been spending the winter in Santa Clara, has shown us a device for producing hot air for drying purposes that seems to be constructed on rational principles and is so simple as to commend it as worthy of attention. To us it appears to be just about the thing, whether hot air is required upon a large scale, or is wanted in ever so small quantities, as the furnace can be made of any size, and do equally good work according to its capacity. Of course, an economical dryer must utilize as much of the heat of the fuel as possible. Dr. Bentley's furnace is so constructed as to waste the least possible amount of heat. He proposes to construct three sizes, worth respectively $50, $75 and $100, capable of drying 10, 20 and 30 bushels of fruit at a time. The rooms and apparatus for drying can be made at the option of the parties using the dryers. The smaller sized need not cost over $25, screens and all complete. This would make a dryer and furnace, suitable for any ordinary orchard, cost only $75.

The dryer is also an excellent heater for dwellings—better than any stove or fireplace. It is already in use in public and private building in various places.

One of these can be seen in operation at Mr. Menzell's hardware store, Santa Clara, and also a model of the furnace. Next month we will give a description of this furnace, as we believe it must prove of great advantage, and is the very thing that our orchardists need.

Truth and honesty often neglect appearances, hypocrisy and imposture are guarded.

Stock Breeder.

Two Kinds of Cattle Husbandry.

THE Colorado *Farmer and Live Stock Journal* exactly expresses our sentiments upon this question:

A citizen of New Mexico owns not less than forty-two townships of land, and has it stocked with sixty thousand head of cattle. In Texas there are cattle ranches nearly as large, the number of cattle ranging from twenty to fifty thousand head. In early times ranches stocked with twenty or thirty thousand cattle were not uncommon in California.

There was an attractive side to this primitive cattle husbandry. It was a grand thing to send forward great herds of cattle to market, or to ride over a domain as large as a whole county. But this kind of cattle husbandry involved no improvements. No crops were raised, roads built or fences made. In short, cattle raising as followed in New Mexico and Texas, or as formerly in California, tends to barbarism. The business develops nothing that is best for the individual; it stimulates no growth, encourages no agricultural improvements, organizes no society, supports no school, and does nothing for a well-ordered community.

There are few who sigh for the good old times when if a hungry man wanted a beef he took it from the fields, or if his horse gave out he exchanged it for a fresh one with the next ranch man. No doubt the rude hospitality of these early times was attractive. But then an ox was worth little more than his hide would bring, and a horse had no commercial value. The "pastoral days" have departed, and they are succeeded by much better ones.

The new cattle husbandry involves the best improvements. When a farmer undertakes to raise the best breeds of cattle his enterprise is sure to carry him far enough to adopt the best methods of culture. The home-farm is put under conditions of renewal. It is conveniently sub-divided, the exterior fences are well-built, and the problem is, how many cattle can be sustained on a given number of acres. These high bred cattle will pay for all the care bestowed upon them. They want rich pasture and a small area.

The sheep and cattle husbandry which have become accessories of the home farm have an influence just the reverse of primitive cattle husbandry. The latter was continually lapsing and carrying everything towards barbarism; the other involves skill, stimulates the best methods of agriculture, and lifts up farming to an intelligent and attractive home pursuit. The great ranges of New Mexico and Texas may serve a useful purpose in furnishing beef for populous cities, but even then it is not the best. The business will disappear before the advancing wave of population, because the very conditions of success are immense ranges and an absence of population.

Best Varieties of Peas.—Early sorts—Daniel O'Rourke, Carter's First Crop, Bishop's Long Pod. Late sorts—Champion of England, Blue Imperial, Veitch's Perfection and several varieties of Marrowfats.

Mammoth, overgrown steers have had their day, and we now come down to the neat, compact, well-fattened animal, both in hogs and cattle. To accomplished this in cattle, good feeding from a calf is necessary."

THE GREAT ANNUAL SALE OF FINE STOCK.

From Hon. Cyrus Jones, President of the Short-horn Breeders' Association of California, we have received a catalogue of the "Great Sale of Thoroughbred Short-Horn Cattle, to be Sold at Public Auction at the Fair Ground in Sacramento, on Thursday, April 20th, 1876." This is the first spring sale, and it will be conducted under the auspices of the association above mentioned.

The association first undertook to conduct the annual sales in the fall, during the State and county fairs, but found that, as the fall was not the season that stock-raisers cared to purchase breeding stock, they had better change the time to the spring, when every intelligent breeder is looking for animals to improve his herds.

We expect that there will be a rush of competitors to this grand sale of fine stock. There will be no horse-racing, or crowd of sight-seers as at the fair times, to divert attention from the sales. Whoever attends will be likely to mean business. The way such sales are attended in the great Short-horn districts east of the Mississippi should be a fit example for the cattle breeders and owners on this coast. There is no place under the sun where fine stock is more needed than in California, to grade up our bands of cattle and improve the general farm stock. There is every reason why our stock men should be awake.

The Short-horn Breeders' Association of California is composed of the best breeders of fine stock, and they represent some of the finest Short-horns in America. Several of the principal breeders will put up some of their best, and an opportunity will be offered to buy that no enterprising owner of cattle can afford to lose. Such breeders of thoroughbreds as Cyrus Jones & Co., Col. Younger and Wm. Quinn of San Jose, W. T. Overhiser of Stockton, John Brewster of Galt, Moses Wick of Oroville, J. D. Carr of Gibilian, M. B. Bourgis of Centerville, and E. Comstock of Sacramento, will put up several head each. We notice pedigrees of twenty-nine bulls and several cows and heifers, and are assured that several head of thoroughbreds not catalogued will also be sold. Besides, there are a number of fine grade Durham cattle to be sold, also Berkshire swine and fine sheep.

We expect the time is not far distant when much importance will be attached to the annual spring sales. They only need a little popularity to draw all the cattle men and fine stock men on the coast. But, really, now is the most important time, for the sooner such stock is obtained by our beef and butter producers, the better for them and their stock. As a purely business proposition there is no better investment for a breeder than *pure blood*.

Camels.—The breeding of camels was begun in Texas, twenty years ago, by an importation of the War Department. From Texas the camels were taken to Carson valley, Nevada. The first importation were India camels; the second were the two-humped camels of China. These two varieties cross well together. The two-humped are preferable, as they are more docile and kind to handle than the one-humped.

The breeding of the camels has been a success, and, as pack animals, has been profitable. They subsist on the sage brush and less desirable herbage of this rugged, barren region, and attain such size as is unknown in any other country. They were the largest we ever saw, and were selected with reference to shipping in the cars. The largest ones could not be put into the ordinary stock cars used on the Pacific railroad. The man who owns and breeds them is a Swiss, and wants to sell out and return to his native land. If he does not, he intends to remove to Arizona with them, for the reason that camels as pack animals frighten the teams of "freighters" and make trouble for him continually. They breed once in two years; and in this lot there was one cow camel with her year old calf at her side, taking his dinner like any other great, saucy calf. The most of these were two and three years old. The five-year-olds were, as stated, small-ish selections from this herd, yet their hums were very near the roof of the car, and their odd-looking heads had to be kept in a very cramped position.

It is a matter of wonder and congratulation that the breeding of superior camels is added to the live stock interests of the country. From this camel-breeding establishment can be supplied all the show animals needed for the world, as they cost no more to rear than mules, and are far better as pack animals. The rigors of winter, and the heat of summer, are alike favorable to their growth and prosperity. Nevada, though, is a fine stock growing region for cattle, horses or sheep, as well.—*Live Stock Journal*.

Sale of Short-Horns During the Past Year.—Says the *Pall Mall Gazette*: Short-horn sales are becoming almost as sensational as those of thoroughbred yearlings were a short time since, and it is no uncommon thing for an animal of the Bates or Booth blood, each of which strains has its respective admirers and even champions, to be sold for a price equal to that which a Derby winner would have realized a few years ago. From comparative tables of the results of those sales during the past year in Great Britain and America, which are published in the almanac of the *Agricultural Gazette*, it appears that the total amounts realized at these sales were almost the same for both countries. The returns refer only to the sales of "pedigree Short-horns"—that is to say, animals inscribed in the Herd Book, which is for cattle what the Stud Book is for the turf; and from them we learn that, while the sixty-five sales held in Great Britain yielded a total of £228,088 16s. 6d., the fifty-seven sales in America amounted to £204,790 6s. 10d. Each of the American sales amounted on an average to £3,593, as against £3,509 for each of the English sales; but the advantage does not in reality remain with American breeders, for though eight less sales were held there, the number of animals disposed of was within ten of those sold at home. The 2,589 Short-horns sold in America averaged £79 each and the 2,589 sold in Great Britain £87 each. The largest total realized at any one sale was £42,019 18s., for which 84 animals belonging to the late Mr. Torr, a Lincolnshire farmer, were disposed of in September. The highest price given at this sale was 2,160 gs., and the average for the whole lot was £510 19s. Still more remarkable was a sale held in Scotland a week previously, when 39 animals, the property of Lord Dunmore, brought £26,223 15s. This gives an average of £672 8s. for each animal, one of which went for 4,500 gs. At a third sale 34 animals brought more than £10,000, and several others took place at which the total was over £7,000 and the average over £200.

The most successful sale held in America was that at which 83 animals brought £18,534 15s. 5d., with an average of £402 19s. 9d. for the whole number, one of them reaching £3,225. At two other sales in America totals of rather more than £10,000 were obtained for 35 and 33 lots, the average in the two cases being slightly over and under £300. These figures may be left to speak for themselves; but it is impossible to avoid the suspicion that purchasers will not in the long run get the best of the bargains.

The *London Court Journal* says the following about Short-horns:

Whether the top price for Short-horns has yet been reached we do not know, but that a Duchess bull was sold for 3,500 guineas is a "great fact." The animal was named the Duke of Connaught, the purchaser was Lord Fitzhardinge, and the price was paid at the sale of Lord Dunmore's castle at Dunmore, near Stilling. It is not surprising to learn that this animal was described as "the finest Duchess bull in the world," and it is satisfactory to know that he is not going out of England. Strange to say, both the sire and mother of the Duke of Connaught came from Canada, having been bred there by enterprising purchasers of Bates' stock. The other prices realized at Lord Dunmore's sale were higher on the average than ever before known. Another Duchess bull brought 3,000 gs., two magnificent cows, 1,950 gs. and 4,810 gs. respectively, and very few of the animals offered realized under £300. The average of the bulls was £992 16s. 8d. per head, and of the cows, £576 5s. 6d. per head, the total average of the sale of 39 lots being £672 16s. 8d. per head.

American Beef on the London Market.—An article in *The Farmer*, published in London, England, representing that forty-two tons of American beef had just been sold on that market for six pence per pound, was deemed of sufficient importance to telegraph to this country. The beef in question was the fourth consignment made by Eastman & Martin, well-known dealers of New York city. They claim to be the first experimenters in this direction, fitting up a line of steamers with refrigerators of the Bates patent, having a forced circulation of air. While the enterprise has proved successful in delivering the beef in good condition in the new Smithfield Market, it remains to be seen whether there is sufficient margin in values between New York and London to make it profitable. Shipping about the best beef found in this market, the first cost, with the subsequent expense of sending abroad—using about 40 tons of ice to each 100 head of cattle—so run up the bills that it is a question whether a successful competition can be carried on with the choice English and Irish beef sold at about 8 pence per pound. After landing in Liverpool the meat is run to London by car, and to prevent its getting dirty by handling, each quarter is bagged or wrapped in cotton, so that the care, labor, and expense are considerable items in the cost of delivery. Further experiments, with a view of economizing some of the expenses are being made, and the question will soon be settled.

The New York *Sun* says: The shipment of American beef from this country to England is an established business. The "Nevada," "Wyoming" and "Dakota," of the Williams & Guion line, have been supplied with refrigerators, and two others are being furnished in Liverpool. The refrigerators are 40 feet long, 28 feet wide, and 9 feet high. At one side is an ice-house, holding 40 tons. A blower, run by a steam engine, keeps a current of cold air from the ice box on the meat.

The Foot and Mouth Disease in Europe—a Remedy.—The foot and mouth disease continues to make its ravages

here; it is a malady more troublesome and annoying than dangerous; it is unpleasantly contagious, also, especially for pigs; it does not destroy the animals, but retards their development and production. The Veterinary College of Alfort recommends the isolation of the affected, and the free use of diluted carbolic acid in the sheds; to break the pustules with a rag-stopper, and garcle the mouth with a preparation of honeyed water sharpened with vinegar, alum, or brandy, several times a day; administering linseed or other meal drinks requiring only to be swallowed. When the feet are sore, the bedding ought to be very dry and clean, and the ulcers each touched with a mixture of alum and carbolic acid in 95 parts of water. If fever be declared along with diarrhea, half a pound of Glaugher salts is added to the drinks to cleanse the blood. Connected with the malady, is a plan of insurance in operation in Upper Savoy. The farmers of a townland form a society; each animal insured pays two francs, and an additional franc as an annual premium. In case of loss, the farmer receives the full price of the animal, provided he has followed the instructions for treating it when diseased. At Lille there is a society that will insure cattle against all risks; the premium being five per cent. on the estimated value of the animal; a single farm can insure as far as 300,000 francs.

Value of Improved Stock.—A writer in the New York *Times* put the question plainly in saying that if a farmer keeps thirty cows that average $30 a year each for milk, and he can increase the average to $40 a year by the use of a thoroughbred bull, of a good milding breed, he can afford to pay a good round sum for a bull. And yet better results than this have been accomplished. If he is raising cattle for beef, and he can add two hundred pounds to the carcass of each, by the time it is ready for the shambles, by the use of a Short-horn bull, it will certainly be profitable for him to pay a good price for such a bull. And yet this is the average result of using thoroughbred bulls on the native cows of the country, as estimated by all the best stock breeders. And this two hundred pounds is clear gain, for it is produced with no greater consumption of food. If the use of a thoroughbred ram on a flock of common ewes will increase the weight of fleece one pound, on the average, certainly more than "five in a hundred could make it pay;" whether more than one in five would or not, is another question. And so with hogs. The difference between the common "woods" breed of the past, and the improved breeds of to-day, is beyond comparison.

Guernsey Sale.—A herd of choice Guernsey cattle imported by the Massachusetts Society for promoting agriculture, over a year ago, were sold at auction at Jamaica Plain, on 3d of November. Twelve head were sold at prices ranging from $64 to $301, and the aggregate amount realized at the sales was $1,734.

Be kind to the young stock. Let the first thing it knows, after its parent, be the kind voice and gentle hand of its master. Accustom it to kindness as it grows up, and when it reaches maturity there will be no difficulty in teaching it to perform its duty.

What men want is not talent, it is purpose; in other words, not the power to achieve, but the will to labor.—*Bulwer.*

The Horse.

BREAKING COLTS.

WHETHER it is best to handle a colt while young, and accustom it to the bridle and obedience, or to wait until it becomes of age to be broken to work, is a question with many persons that will bear discussion. California farmers have, many of them, tried both methods, and we would be glad to getthe opinions of such as take an interest in the question. One thing should be considered: colts that are handled young are generally fooled with by boys, or in playful sport by men, and are likely to lose confidence in men, and to become persistently unruly. On the otherhand, if never handled, they have as much respect as fear of man, and, having no bad tricks, are more likely to become fully obedient as soon as they find it is required, and that it is easier and better for them to be observant and yield compliance than to resist their master. We have often thought upon this subject, and were reminded of it by reading the following from a working farmer in the *Rural New Yorker:*

An old saying is, "live and learn," and to-day my son taught me something I had forgotten. I set him to break a colt rising three years old, which, being by a fast trotting horse, has been saved entire. He had never been touched by any one, being as wild as any animal could be. My son, with a man to help, put on a head-stall, with a long rope attached, which they did in a stable after he had been separated from the company he had been running with all summer. He was then moved about until he discontinued hanging back, which he persisted in doing for nearly two hours, when, as his neck probably began to get tired of the strain and he found by sundry plunges that there was no getting away, he commenced to walk along quietly, and then a collar was first put on, and at intervals, as he cooled off and submitted to be handled all over, harness was put on, so that by dinner time he had drawn a log of wood three-quarters of a mile and back again. He was then put into the stable, when he ate the first quart of oats he ever had and also a little hay, after which old "John"—a steady, heavy, fine cart horse—was hitched into a stone boat with the colt by his side, and after one hour's hard walking around a paddock the two were put to a wagon, and they went a distance of two miles to some oat stacks which had been pulled by some steers having broken down the rails, and about half a load of loose oat straw was brought home, and his coltship seemed perfectly quiet and willing to move as guided, so that, instead of waiting to go day by day in training, it was done hour by hour, and judging from his lack of fear and apparent liking to be brushed and cleaned, it is probable he will do half a day's work to-morrow quite as tractably as if he had been in hand days instead of hours. I shall have him work about three days a week, so as to keep him growing and looking in good condition.

We worked a filly in the above manner last winter and turned her to grass in the spring. She is now doing regular work and is a very fine animal; but in that instance we took days to do what has been done since morning.

I recollect now that years since, when I farmed in England, that although it was a month's job to break a nag, there being regular colt breakers by profession who got them quiet to ride and with good mouths, yet the cart horse breed of colts had a more summary way of breaking than the one just related, for as horses are worked a good deal there three or four in length, one before the other, the colt was haltered and forcibly pushed to the horses, and two before and one behind started to work, with a man on each side to keep him straight, which, as the horses kept regularly walking on, was not a difficult job. Of course there would be a deal more trouble with some than with others; but after finding there was no escaping, most of the colts would soon become docile, and often there would be one which would walk away from the first and give no trouble, the men walking on each side leaving, so that the regular driver would be all required to mind him.

Again—The colt has worked half a day, going quietly and actually standing instead of a horse hauling corn stalks. Advocates for handling colts from the time they are weaned won't like to read of such dispatch.

Hereditary Disease in Horses.—Darwin sums up his researches upon this subject as follows:

Even if no single fact had been known with respect to the inheritance of disease and malformations by man, the evidence would have been complete in the case of the horse, as horses breed quicker than man, are matched with care and are highly valued. I have consulted many works, and the unanimity of belief by veterinarians of all nations, in the transmission of various morbid tendencies, is surprising. Authors who have had wide experience give in detail many singular cases, and assert that contracted feet, with the numerous contingent evils of ring bones, curbs, splints, spavin, founder and weakness of the front legs, broken and thick wind, melanosis, specific opthalmia, and blindness, (the great French veterinarian, Hugard, going so far as to say that a blind race could soon be formed) crib-biting, jibbing and ill temper—are all plainly hereditary. Youatt sums up by saying that "there is scarcely a malady to which the horse is subject that is not hereditary," and Mr. Hugard adds that the doctrine "that there is scarcely a disease that does not run in the stock," is gaining new advocates every day. I may add to these facts, established by such weight of concurrent testimony, what I have before marked in general, namely, that it is not the actual ailments, such as contracted feet, ring bones, curbs, splints, and spavin, but the predisposing causes that are transmitted. The disposition of parts, the imperfect shape and size, or the faulty texture of any tendon, bone or muscle most favorable to a particular disease, are transmitted from sire to son. The same may be said of those disorders which affect the internal organs or the whole body. The abnormal condition of the blood, and not the scrofulous symptoms it produces, is hereditary. The weakness in some of the muscles of the larynx that cause roaring, has a hereditary tendency. The narrow loins and flat sides that give a proneness to attacks of diarrhea and colic, belong to a certain lienage. This constant tendency of morbid condition or defective organs to re-appear in the line, shows how important it is that horses selected for breeding should be sound in wind, limb, and condition.

For a Cribbing Horse.—Feed with a nose-bag and give hay only from an iron rack. Coating the wood work in a manger with crude petrcleum is also recommended. The bad taste will soon cure the animal of all desire to bite his crib.

Treatment of Shying Horses.—Shying generally arises from timidity, but sometimes it is united with cunning, and induces the animal to assume a fear of some object for the sole purpose of finding an excuse for turning aside. The usual cause of shying is, doubtless, the presence of some object to which the horse has not been accustomed, and if he has defective eyes, which render him short-sighted, it will be difficult to convince him of the innocent nature of the novel object. There are endless peculiarities in shying horses, some being dreadfully alarmed by one kind of object which to others is not at all formidable. The best plan of treatment which can be adopted, is to take as little notice as possible of the shying, and to be especially careful to show no fear of its recurrence when the "alarming" object appears in the distance. When the horse begins to show alarm, but not till then, the driver should speak encouragingly to him, and if necessary with a severe tone, which may even be supported by the use of the whip if his onward progress cannot otherwise be maintained.

The principle which should be carried ont is to adopt such measures as will get the horse to pass the object at which he shies, somehow or other, and this should be effected with as little violence as possible, always commanding in an encouraging tone as soon as the purpose is gained. Nothing has so great a tendency to keep up the habit as the plan so common among ignarant grooms of chastising the shyer after he has passed the object of his alarm. If he can be pursuaded to go quietly up to it, and examwith his muzzle, as well as with his eyes, great good will be effected, but this can seldom be done with moving vehicles, and heaps of stones or piles of sand are generally only alarming from defective vision, so that each time they assume a new phase to the active imagination of the timid animal. Punishing bits only make a high-courraged horse worse, and the use of "overchecks" rarely, if ever, proves beneficial.—*Wilkes' Spirit.*

The selection of a stallion is an important matter. He should be from a family with well established characteristics which he, like the other members of the same family, will be likely to transmit and stamp upon his offspring. He should be of good size, have good bone and muscle, and power and ability to do what will be required in his offspring. He should have a kind and tractable disposition, for vicious characteristics are transmissible. He should have good action, for action is wanted in a horse. If a horse is wanted for draft purposes, breed with that object in view, and breed heavy draft horses. If horses are wanted for general purposes on the farm—to plow, to mow, and to do all kinds of farm work, and also to ride, to drive before the buggy or carriage—then a different horse is wanted—more active, and that can be used more handily for any and all purposes. If he has fine action and gets over the ground rapidly and in fine style, he is better to ride or drive, and will command a high price; for all people will pay for beauty and speed in a horse if they have the means. Many of our fastest trotters have been bred on a farm, by farmers, and worked at farm work. Even Occident, the great California horse, was worked hard (in a butcher's wagon and otherwise) for several years, and after that trotted in 2:16¾.—*Ex.*

There are in San Jose only twenty-one livery stables for the accommodation of the inhabitants of, and visitors to this burg.

Spavin.—The exciting causes of spavin are strains, concussion, and sometimes, though rarely, blows. A kick from another horse has been known to produce one of a very serious character. Any cause which will excite inflammation of the tissues of the joint, is liable to cause a deposition of bony matter, or ulceration of the tissues covering the bones.

The first and most important step to take in the first stages of spavin is to place the animal in absolute rest. The hock joint of the horse and the ankle of a man are anatomically nearly alike. If a person sprains his ankle the surgeon orders rest, not for a day or week, but for a long time, then apply a cooling lotion—cold water freely applied is perhaps as good as anything to arrest the inflammatory action. Afterwards some stimulating application, perhaps counter irritation (a blister) may be necessary to bring the deep-seated inflammation to the surface.

Balky Horses.—The following devices have been successfully tried to accomplish the desired end:

Tying a string around the horse's ear close to the horse's head.

Hitching the horse to the single-tree by means of a cord instead of the tugs; the cord fastened to the horse's tail.

Filling the mouth full of some disagreeable substance.

Tying a stout twine around the leg just below the knee and then removing it when he has traveled some distance.

Never whip a balky horse, for the more he is whipped the crazier he will become. Let everything be done gently, for boisterous words only confuse him and make him worse. Treat him in the mild manner that you would a crazy man, and you will succeed.

A Good Colt of 1900 Years Ago.—We may prognosticate great things of a colt if, when running in the pastures, he is ambitious to get before his companions; and if, in coming to a river, he strives to be the first to plunge into it. His head should be small, his limbs clean and compact, his eyes bright and sparkling, his nostrils open and large, his ears placed near each other, his mane strong and full, his chest broad, his shoulders flat and sloping backward, his barrel round and compact, his loins broad and strong, his tail full and bushy, his legs straight and even, his knees broad and well knit, his hoofs hard and tough, and his veins large and swelling all over his body.—*Varro.*

A Practical Use of Dogs.—It is a fact perhaps not generally known that there is a firm doing business in San Francisco who purchase the thousands of dogs slaughtered by the pound master of that city or that may have been otherwise killed, for which they pay 40 cents each. The carcasses are conveyed to their manufactory at South San Francisco, where the skins are removed and sold to the tanneries, the hair taken off and resold to plasterers, the hide tanned, made into gloves and sold in the market. The denuded carcass is then thrown into a huge caldron and boiled until the bones are easily separated from the flesh, when they are removed and sold to the sugar refineries, where they are ground to a powder and used to clarify sugar. The oil that rises to the surface of the boiling mass is skimmed off and manufactured into cod liver oil, and the remainder is used for the purpose of fattening hogs. *Ex.*

They who are most weary of life, and yet most unwilling to die, are such who have lived to no purpose—who have rather breathed to no purpose.

Porcine.

The So-Called Hog Cholera.

The past season has been very fatal to many of the Western hogs. A large portion of many herds has been carried off by what is known as hog cholera. The disease is so virulent, that before any course of treatment can be determined on, it has run its course, and in the majority of cases most of the herd is lost. Treatment is either of no avail whatever, or if the animal recovers, it is left in such a wretched condition, paralyzed, rheumatic and emaciated, that it is of less value than the cost of restoration. It is therefore necessary to consider how to prevent the "hog cholera," rather than to treat it.

The disease is closely related to the so-called Texan fever, or splenic apoplexy of cattle, and on examining a dead hog, the spleen is found gorged with black blood, soft and greatly enlarged. Sometimes it takes the form of carbuncular erysipelas, or the black leg of cattle, the legs breaking out in sores. It is a true case of blood-poisoning, that results in a fever which may be called typhoid, enteric or intestinal, or anthrax, as persons may choose. The disease can be prevented, but can hardly be cured. It is most common in low, undrained, marshy places, or where the hogs are kept in filthy pens, and have to drink water fouled with their own evacuations. From these it spreads to other quarters where it would not originate. Sanitary measures, good food, pure water, clean quarters, and the regular removal of the droppings, and the abolition of the disgusting practice of permitting hogs to "follow cattle" and consume their excrement, would doubtless entirely prevent it. The most economical thing in stock keeping is humanity, and such measures as would preserve the health of the owners themselves, would immediately remove their stock from the danger of the virulent diseases which now decimate them.—*National Live Stock Journal.*

A Profitable Hog.—The following description of a profitable hog, was reported by the committee, at the Swine Breeders' Convention at Indianapolis, Ind.:

He must have a small, short head, heavy jowl, and thick, short neck; ears small, thin, and tolerably erect, not objectionable if they droop slightly forward; must be straight from the neck back to the flank; must be let well down to the knees in brisket; of good length from head to tail; broad on the back; ribbed rather barrel-shaped; must be slightly curved or arched in the back from shoulder to the setting on of tail; tail small; long in the ham from hock to letting off the loins; shoulder not too large to give symmetry to the animal; ham broad and full; hair smooth, and evenly set on; skin soft and elastic to the touch; legs short, small, and well under; broad between the legs; good depth between bottom and top of the hog; with a pleasant, quiet disposition; should not weigh more than three or four hundred pounds gross, at twelve to eighteen months old, according to keep; color may be black or white, or a mixture of the two. The above described hog will measure as many feet from the top of the head to setting on of the tail as he does around the body, and will measure as many inches around the leg, below the knee, as he does feet in length around the body; depth of body will be four-fifths of his hight.

Old Foggy Farmers.—Is not a farmer an old fogy who will continue to breed the common scrub hogs of the country, when there is undoubted testimony from everyone who has tried the improved breeds, such as the Berkshire, Poland China, etc., that there is a saving of at least 25 to 50 per cent. in feed, in producing a certain number of pounds of pork, by keeping the improved breeds? Is it not everywhere admitted that some animals will fatten more readily than others—that some breeds will fatten more easily than others, on less food? That some breeds of cattle are eminent for their butter-producing properties? That some breeds of sheep are noted for wool, and others for the quantity and high quality of mutton they produce? That some horses are noted for their speed as trotters, and others for their speed as runners? Is it strange, then, that hogs should be subject to the same law of improvement? That skill and care and pains-taking selection of particular animals, should finally give us breeds that keep easily, fatten easily, mature early, and have all the desirable points required in swine? And yet there are farmers who think the hazel-splitting, razor-backed, alligator hog just as good as any. They must believe the world stands still; that there is no change, no improvement in anything. Such farmers we class old fogies.—*Coleman's Rural World.*

The hog is properly a European animal, though the wild hog was found in the mountains of Syria and Asia Minor, and still exists in the wilds of the Atlas mountains in Africa. The prohibition of swine's flesh among the Egyptians and Hebrews, shows that it was known as a domestic animal even in those early times. Among the Greeks and Romans the hog was rather popular as a flesh furnishing animal. It is the most prolific of our domestic animals, and a given weight of flesh can be produced at a less expense than any other form of animal food; but it is the hardest of digestion, and least healthful of all our meats. In cold climates, however, the large amount of fat it contains is important as a heat producing element, and, therefore, Northern nations use largely of pork. The filthy habits of the hog are owing chiefly to his domestication. In the wild state the hog is a cleanly animal, living almost exclusively on vegetable food, while the domestic hog is omnivorous, and quite fond of animal food.—*Rural San.*

How to Keep Boars.—We read about the care bestowed upon stallions, rams and other breeding animals, but rarely do we ever see a word on the care of boars. They are usually raised with breeding sows, and run and worry and become nothing but runts. They go days without food. They disappoint their owners and everybody else. Now, it is just as important to take care of a breeding hog as it is of a horse, and a good snug pen or yard should be used to enclose them. They can be well fed here, and made to grow; and if their services are needed, it is easy to have a door or gate to let breeding stock in. If this plan is followed, one will have a far better animal, and far better stock. The slops of the kitchen, sour milk, vegetables, bran and soaked corn can be fed to him, and he will be a credit to all concerned.—*Rural World.*

A man that will swear at the pig that neglected to eat the acorn that grew the tree from which came the refractory piece of oak he is vainly trying to split, may be said to have gotten down to the *root* of the thing.

Dentition in the Pig.—At birth the pig has the temporary tusks and the corner incisors well up. These teeth are very fine and sharp, almost like needles, and occupy a position on each side of the mouth, leaving a clear space in front. In a month to six weeks the central temporaries are cut, and soon after the completion of the second month the lateral incisors are cut, and the animal has its full set of temporary teeth, including three molars on each side, top and bottom, six incisors, top and bottom, and a tusk each side, top and bottom. At the age of six months the premolars, which occupy a position between the first temporary molar and the tusk, are cut, also a permanent molar, which is fourth in situation. The premolars are not always present, and in their absence the fourth molar will be accepted as an indication of the age of six months.—*Agricultural Gazette.*

A successful swine-breeder says sows should be put in their farrowing-pens about two weeks before the expected time. This pen, for the large breeds, should be eight feet square, and for the small breeds seven feet square. A shelf of one and a half inch plank, eight inches wide, should surround the inside of the pen, fastened securely, with the underside of the shelf seven inches from the floor. This shelf will prevent the sow from lying on her pigs or crushing them against the wall.

This letting males run promiscuously with a lot of breeding stock, and particularly so far as hogs are concerned, can not be too strongly condemned. Every good breeder knows it, and no good breeder will permit it to be done.—*Rural World.*

Quantity of Seed for an Acre.

The following table, from Mr. Gregory's *Annual Seed Circular*, is inserted as giving useful information which is often wanted by our friends in guiding the amount of their seed purchases.

Seed men vary much in their directions for the quantity to be planted to the acre. In the following list we give the quantities of the more common sorts used by practical farmers:

Dwarf Beans, in drills	1½ bush.
Peas, that make small vines	½ do
Peas, that make large vines	1¼ do
Beets, in drills	4 lb
Cabbage, in hills	½ lb
Cabbage, to be transplanted	2 oz
Carrot, in drills	1 to 1½ lb
Musk Melon, in hills	1 to 1½ lb
Mangold Wurtzel, in drills	4 lb
Onion, for bulbs, to sell green or to trace in drills	6 to 8 lb
Onions, for dry bulbs, in drills	3 to 4 lb
Onions for sets, in drills	30 lb
Onion sets, in drills	10 bush.
Potatoes, in drills, cut, depends on number of eyes	8 to 14 do
Radish, in drills	5 lb
Spinach, in drills	1 to 15 lb
Sage, in drills	2 to 6 lb
Squash (run varieties) in hills	2 to 2½ lb
Squash (bush varieties) in hill	3 to 4 lb
Tomato, in bed to transplant	2 oz
Turnip, in drills	1 to 1½ lb

The Illinois Farmer's Association, at their convention at Bloomington, adopted, among other resolutions, one demanding the withdrawal of the national bank circulation and the issue of a greenback currency direct from the treasury, to be made a legal tender for all debts, both public and private, except the principal and interest on the public debt, contracted to be paid in gold, and interchangeable for registered bonds bearing interest, to be paid in gold or legal tender, at the option of the holder, at a rate not exceeding three per cent., said bonds being redeemable at the pleasure of the Government in from ten to fifteen years.

Poultry Yard.

Domestication of Wild Fowls.

BEING an enthusiastic sportsman as well as fowl breeder, I have learned from many years' experience in the hills, marshes, and tules of this country, the habits and merits of many varieties of wild fowl, and am looking forward to the time when I can provide the place, and have the leisure to demonstrate the feasibility of crossing our domestic fowls with those beautiful and edible birds of the valleys and marshes. Mr. Rodman mentions "the peerless Rouen duck, produced from the domestication of the wild Mallard," (or as is generally supposed, the tame duck bred to the wild Mallard, as has the domestic turkey with the wild bird, producing the large and beautiful Bronze turkey), instance also the mongrel goose, so much prized and sought after by the epicures. I think many fine birds could be obtained by crossing several varieties of the wild fowl with the domestic Mallard, as I have seen and obtained several beautiful specimens of hybrids during my hunting excursions in San Pablo and Suisun bays in this State. One I particularly remember was a cross between the wild Mallard and the Pin-tail (commonly known here as the Sprig-tail). These birds are similar in their habits, often flock together, are non-divers, feeding on the mud-banks, on slugs and snails, or in the ponds for grasses and the like. The flesh of the former is very juicy, and of a rich orange color, while the latter is equally rich and juicy and of a delicate white, and finer grained, much like that of a chicken in color. I think the cross would produce a most desirable bird for the table, and by domestication produce as large a duck as the famous Rouen. The only question in my mind regarding their success is the chance or their progeny being "mules." I could mention others that in my opinion could be bred or domesticated with flattering results.

My old lamented friend Ward Eaton, of San Francisco, imported several years ago from Oregon and Washington Territory a dozen or more of the red grouse of that section of country, which he thoroughly domesticated in his yard; but he died before he had fairly completed the experiment of breeding them, and they were finally turned out in the hills of Marin county. What the result has been I have never ascertained. They may have met the fate of most of the Eastern quail which have been brought out here—they having been killed by their stronger neighbors, the California quail, which seems to have taken an antipathy to them and "go for them" as Bill Nye did for the "heathen Chinee."
—*Chas. A. Morse, of Oakland, in Poultry Journal.*

VERMIN ON FOWLS.—The *Fancier's Gazette* speaks as follows: A very important duty of the poultry breeder is to see that his chicks are free from vermin. Sprinkle sulphur continually over the chickens, roosts and houses, the latter two occasionally washed with kerosene. If you find the slightest symptoms of the presence of vermin, get rid of them immediately. Sometimes careless breeders will lose whole settings of eggs simply by not occasionally sprinkling the hens and nests with sulphur, or other good insect powder, and the poor hens, unable to stand the dreadful pests, have forsaken their nests. A careful breeder will never allow the scourge of lice among his poultry to trouble him, but will see that he "has none of it.

FINE POULTRY.

Our attention as been called to the yard of Judge Collins, of San Jose. The judge has spared no expense to get the very finest pure-bred fowls to be obtained in England and America. He makes specialties of the black-breasted Games, brown Leghorns and dark Brahmas. For one trio of Game fowls, he says he paid $75. We have never seen finer birds. He has one Game cock imported from India, called the Wild Game—a novelty—powerfully built, but not a very heavy fowl. The brown Leghorns are beautiful, and just such hens as farmers who have plenty of room for fowls to run about should have. The dark Brahmas are also beautiful, large and extra fine. Being heavy and of quiet habits, they are better adapted to small yards than lighter poultry. This is not saying that heavy fowls are not also good where room is plenty. The other fowls kept by the judge are Game Bantams and Rouen ducks.

One word about Games. It has been found that they are of other, and better, use than to breed for fighting purposes. You will remember that, on general principles, *the healthiest fowls are the best.* Now while other breeds of hens are bred for certain fine points, independent of healthy considerations, the Games are invariably selected for hardiness, strength and endurance. Hence they are standards of excellence in this direction, and are found to be the very best blood with which to cross all other breeds. The chicks are the hardiest and easiest to raise, and there is less liability to get sick among the Games than any other breed. The hens are trim-built, cleanly, good layers, and as peaceable as any hens. The cocks are not more likely to fight than others, unless trained to it, or thrown among strange fowls. The very fact that they fight so desperately, shows the abundance of vital energy they possess. In California, where hens so often get sick, we think this is the best blood to mix with other sorts to insure health.

DOMESTIC FOWLS IN AFRICA.—Dr. Livingstone wrote: "When I was coming through Londa, my men carried a great number of fowls, of a larger breed than any they had at home, (Linganti, almost exactly in the center of Southern Africa). If one crowed before midnight, it had been guilty of calling death to visit the tribe, and was killed. The men often carried them sitting on their guns, and, if one began to crow in a forest, the owner would give it a beating, by way of teaching it not to be guilty of crowing at unseasonable hours." In his writings he very frequently refers to domestic fowls as one of the principal articles of diet, and every tribe in the great region over which he traveled had them; and he stated that it was customary for every tribe that he approached to send men with cooked fowls and other food to meet him, thus showing a genuine hospitality scarcely credible among savages. When he was 350 miles inland from the western coast, he writes: "My men were busy collecting a better breed of fowls and pigeons than those in their own country. The anxiety these people have always shown to improve the breed of their domestic animals is, I think, a favorable point in their character." At Rovuma, on the eastern coast, he said: "The people have no sheep or goats; only fowls, pigeons and Muscovy ducks are seen." Although he mentions the Guinea fowls occasionally—and every traveler agrees that they abound in Africa—it is evident that he more frequently had reference to large breeds of which the cocks *crawed;* for when 550 miles inland from the eastern coast he mentioned the Guinea fowls particularly, viz.: "Guinea fowls and francolins abound."

When Chuma and Lusi, Livingstone's faithful attendants, who brought his remains to England, saw some immense Cochins at a poultry show, they said these fowls were not larger than those they saw when with their master on the islands of lake Tanganika.

It is singular that no other domestic fowls besides the Guinea fowls have been brought from Africa to this country, considering that there are fine fowls there, and that so many have been brought from Asia. Some enterprising fancier should make inquiries of men engaged in the African trade, and try to import some of the large varieties of fowls mentioned so frequently by Livingstone. Africa is a very large and a very old country, and probably the varieties of domestic poultry are many, useful and curious. How did they get there? may be a question of the curious; but a more profitable one might be, How can we get them *here?* Had Livingstone seen those fowls with Mr. Felch's eyes, the account would have been so wonderful and enthusiastic as to have induced some fancier to procure some very soon, but Livingstone was absorbed in a greater matter, and gave them only a passing notice, which, small as it is, suggests the importation of some remarkable fowls from Africa yet. The Asiatic fowls differ much from the European or American, and, doubtless, the African differ from either as widely, judging from the only specimen from that country—the Guinea fowl.—*Poultry Journal.*

WORMS IN FOWLS.—Some years ago I had several fowls drooping about with all the symptoms of cholera, except that they lingered for a longer period. After experimenting with almost every known remedy, I at length determined to make a *post mortem* examination, and, if possible, determine the cause. Accordingly I proceeded carefully, that nothing should escape my notice. Arriving at the intestines, I found that the entire lining was apparently removed, and they contained no less than fifty worms, about two inches in length, and as thick as an ordinary knitting needle, both ends of which coming to a sharp point like a pin. They were white in color and as tough as sinews. I then gave the remaining fowls close attention, and frequently saw that as soon as they passed from one fowl, another would hastily swallow it, and, I doubt not, would soon become affected. At length I hit on the following remedy: After they had gone to roost, I made a strong tea of common worm seed, and gave each one about three tablespoonfuls. Early next morning, before they had left the perches, I removed the dropping from beneath them, and found it literally alive with worms. I again dosed them on the following evening; this time they did not expel so large a quantity. I then began feeding them wheat shorts and bran, adding a little stimulant, and carefully avoiding anything that had a tendency to irritate the intestines. In the course of a week they were seemingly as lively as ever. Since then I have found on several occasions small, conical worms in turkeys in great numbers, and am of the opinion that thousands die from this cause, while it is attributed to cholera. The symptoms from which I detect it are from their slow, stiff, crampish movements, and disorderly, sorrowful appearance.—*Ex.*

RED PEPPER AND POULTRY. I do not know if other persons who raise poultry and pet birds are as much dependent as I am on red pepper; but I have found so much benefit from its use in my poultry yards and bird cages, that it may not be amiss to call the attention of others to its good properties. I do not speak of the article that is sold in drug stores—and sometimes not remarkably fresh—but of the capsicum that grows in our gardens. I have tried all the different varieties, and the most pungent and efficacious is the small kind mostly known by the name of "bird's pepper." The plant in itself is a beautiful object; grows about two feet high, and in autumn its bright little scarlet berries look like coral beads peeping from under the dark-green foliage. Indeed, one plant in a pot is a very pretty ornament for a flower stand. The seeds possess a stimulating and reviving property, and I find that two or three given to newly-hatched chickens, especially if they are weakly, have a most happy effect. If a hen looks feeble after moulting, six of these berries or pods, given daily in some corn meal and sweet milk, improves her wonderfully. Last summer two of my canaries began to droop. Every day I gave them each one seed of the "bird's pepper," and in less than a week they were quite well. The same remedy is invaluable for mocking birds.—*An Old Farmer, in Woonsocket Patriot.*

SCURVY LEGS.—Having seen many cases written out at great length on healing this eyesore, I have yet to hear definitely what is the cause. Many are no doubt ready to say, lice, of course, to which I would say, from microscopic revelations, this is a peculiar insect by itself, and is brought into existence by the adherence of filth to flesh. In short, it is just exactly *Itch.* For a preventive see that your fowls have clear runs and coops; and for a sure and speedy cure, use an ointment of lard and sulphur. One or two applications is sufficient.—*Ex.*

YUNO HEN is one of the two new Chinese Ministers to this country. With a diplomatic Shicken already in Washington the place seems likely to become a first-class poultry yard. Russia might contribute a Pulletowski to help the thing along.

IT is the belief of a writer that many of the diseases incident to poultry are due to neglect in providing them with pure water.

ALWAS thoroughly clean out the nest after the hen is through setting.

EVERY year the use of iron in the manufacture of implements is extending. The best mowers are now made without a particle of wood about them except the tongue and whiffletrees. But iron might be usefully employed to a greater extent than it now is in the furniture of barn buildings and implements in every-day use. Feed-troughs of all kinds, racks and mangers, gutters, drains, gate-posts, gates, fencing, wheel-barrows and many other things now made of wood, would be much more durable and economical if made of iron. The cost would be more at first, but a set of iron furniture in the stables, barns, pens and yards would not need replacing in a lifetime.

MODERN TIMES. "You see, grandmamma, we perforate an aperture in the apex, and a corresponding aperture in the base, and by applying the egg to the lips and forcibly inhaling the breath, the egg is entirely discharged of its contents." "Bless my soul," cried the old lady, "what wonderful improvements they do make! Now, in my younger days we just made a hole in both ends and sucked."

Pisciculture.

Progress in Fish Culture.

From *Harper's Monthly* for March we take the following:

As usual, the subject of pisciculture and the fisheries continues to occupy a large share of the public attention, in view of the popularity of the measures taken looking toward the increase in the supply of fresh-water fishes and the proper utilization of the products of the waters generally.

Of the various State Commissions, those of Virginia, California and Maine have lately published their reports of satisfactory work.

The varied enterprises in which the United States has been engaged during the autumn have been successfully prosecuted, the United States hatching establishment on the Sacramento river, under the charge of Mr. Livingston Stone, having obtained nine millions of eggs, in bulk amounting to eighty bushels. Some two millions of the young were hatched out and placed in the Sacramento for the purpose of keeping up its supply, and the remainder of the eggs were sent East, for the most part to the State Commissioners of Fisheries. The introduction of the young fish into suitable waters was prosecuted mainly during the months of December and January and nearly all the waters of the United States east of the Missouri river have received their share. A very large number were planted in the head waters of the Ohio, the Mississippi, and other streams in the central parts of the United States, as well as in the waters tributary to the great lakes, and those of the East from Maine to Georgia. It is not too much to hope that in a few years most satisfactory results from the experiment will be experienced. Mr. Atkins has also continued his work in collecting and developing the eggs of the Eastern salmon at Bucksport, Maine, and has secured between three and four millions. These, as being taken later in the year, and of slower development, will be distributed in March or April. In addition to his labors with the sea salmon, Mr. Atkins has also secured a large number of eggs of the landlocked salmon from the Grand Lake Stream, in Eastern Maine, some nine hundred thousand eggs in all having been placed in the hatching boxes. In the course of its labors during the summer of 1875, having reference to the shad, about twelve millions of young were hatched out and distributed in various waters by the United States Fish Commission.

A very important enterprise of the same general character is that which is now in progress under the direction of the Fish Commissioners of Michigan, Ohio and Canada. The Michigan Commissioners are now hatching about seven millions of white-fish eggs, those of Canada having almost as many. The Ohio Commissioners were unable to complete their establishments in time for extensive operations this season, but they have at their four hatching stations a considerable number of the eggs of the white-fish, partly furnished to them by the Commissioners of Michigan.

An important movement has been made on the Hudson river by Seth Green under the direction of the Fish Commissioners of New York, in the multiplication of sturgeon. The economical value of this fish is only beginning to be appreciated in this country, although in Europe it has long ranked among those of most importance. But already a large business in the manufacture of isinglass and caviar, as well as in supplying this fish for consumption, both fresh and smoked, has been prosecuted for some time. The Hudson river formerly abounded in sturgeon, which have become scarce, and the object of Mr. Green's work has been to increase the number. An incidental benefit resulting from the multiplication of these fish, it is expected, will be the destruction by them of the stake nets which at present do so much to prevent the natural increase of shad in that river, the nets being too weak to resist so powerful a fish as the sturgeon.

The prominence of the turbot and sole among the more expensive fishes of Europe has suggested the idea of introducing them into American waters; and at the request of Mr. J. S. Kidder, of Boston, the United States Fish Commissioner is now engaged in making preparations for transferring a sufficient number of young fish from the British coast to that of Massachusetts to make a satisfactory experiment, the expenses to be borne by Mr. Kidder.

Fish Culture in the Northwest.—A writer in the Chicago *Times* says:

In no State is fish culture receiving more attention than Michigan. Aside from private enterprise, the State and United States have aided in the work. A State hatchery, under the supervision of Hon. George H. Jerome, of Niles, is located at Pakagon, in which over 700,000 salmon have been hatched and distributed to the waters of the State during the last four months.

A State hatchery for white-fish is also established at Detroit, in which there are now over 7,000,000 of eggs that were taken from the white-fish of Detroit river, during the first week of November, and which are expected to hatch in March. In about ten days after they hatch the umbilical sac (from which they obtain their nourishment) will be absorbed, when they will be "planted out" in the lakes of the State that are thought to be suited to their habits.

The great success that has attended the hatching and letting loose of young shad into the Connecticut and Hudson rivers, and the consequent reduction of price at the fishing grounds, from 50 cts. to a dime apiece for shad, give encouragement to promoters of this enterprise, and inspire the hope that the investment will prove a good one.

At this place, 25 miles northwest of Detroit, is the hatchery of Mr. Frank Clark. The Deputy Fish Commissioner of the United States, James W. Milner, made arrangements last fall with Mr. Clark to hatch out 800,000 salmon eggs and 4,000,000 white-fish eggs. The salmon eggs were obtained from the head waters of the Sacramento river, California. They were out of a lot of 8,000,000 that were obtained there under the auspices of the United States Fish Commission in September last. The eggs arrived at this place on the 7th of October, and commenced hatching on the 25th, and continued up to the middle of November. When first hatched they were about an inch long, nearly transparent, and had a large appendage which prevented them from swimming, but which furnished them their nourishment during the first forty days of their existence. At the end of this the umbilical sac was absorbed, and the fish had grown to be over an inch long, and they required food. It was at this stage that they were "planted out" into streams of Ohio, Indiana, Illinois, Tennessee and Kentucky.

These rivers were selected that appeared to be the best suited to the habits of the fish. Salmon are always hatched in fresh water, where they remain till they are one to three years old. Then, when no obstacles intervene, they go to salt water where they grow very rapidly, and when of ten pounds weight or more they return to propagate their species. It is a well established fact that, if no insurmountable obstacles prevent, they will invariably go to their native spawning beds. It may interest some in Chicago to learn that 286,000 young salmon were turned loose into the Kankakee river during the last thirty days. They were put into the head waters, near South Bend. It is thought by those who have given the subject careful examination that the California salmon *(salmo quinnat)* will thrive and be able to withstand the high temperature of the waters of our western and southern rivers.

Tests were made last summer in the San Joaquin river, a good salmon stream in California, and it was found that the temperature of the water was from 80 to 85 degrees for weeks at a time, which is higher than that of the Mississippi or the Gulf of Mexico.

Mr. Jerome, in behalf of the State is making an experiment by putting young salmon into the lakes, hoping that the fish will be content to remain in the lake and not attempt to push down to salt water over Niagara falls.

Is it not best to make these experiments? The rivers of Great Britain, many of which were nearly barren, and others in which no salmon were found, have by artificial propagation become sources of income to the government and furnish an abundance of wholesome food for the people. What has been done there may be done here, and we predict that the 8,000,000 eggs which have been distributed to various States will produce salmon suited to the streams in which they are placed, and that their progeny will furnish a rich supply of food for coming generations.

The Massachusetts Fish Commissioners have reported for 1875. From a summary given by the *New England Farmer* we quote the following as of general interest: In the remarks upon trout culture great stress is laid on the fact that large and stagnant ponds are not favorable for trout, as the water becomes too warm for the health of the fish; owing to this reason many attempts at trout raising have failed. About 270,000 salmon were hatched last year, from spawn received from the Bucksport, Maine, establishment, and distributed in the headwaters of the Merrimac. A large amount of land-locked salmon spawn will be received from Maine next year; over 75,000 California salmon have been hatched from 80,000 eggs received from that State, and have been distributed through the State. Last year about 5,000,000 young salmon were sent from California to the Atlantic States, besides 2,000,000 placed in rivers in that State. For the completion of the Lawrence fish-way and for improvements of the one at Holyoke, the Commissioners recommend an appropriation of $8000, and $5000 for other expenses of the Commission. The total expense of the Commission, last year, was $6061. Among the ponds leased, last year, was Lake Pleasant in Montague to that town for 10 years; there are 55 leased ponds in the State. E. H. Kellogg of Pittsfield, for the lessees of Pontoosuc Lake in that town, reports that 400 or 500 land-locked salmon were placed in it, in 1875, that they are doing well, and that the leasing of Pontoosuc Lake will result greatly to the advantage of the public.

The culture of fish is one of the most successful enterprises of the times; and it promises great benefits to the wants of man. With proper diligence and care in this matter, warm winters, so generally fatal, as this has been, in the loss of meat, may be regarded with little concern. As an illustration we note that the United States fish-hatching establishment on the McCloud river, a branch of the upper Sacramento, has been operated with great success during the past year. Over 9,000,000 salmon eggs have been obtained, of which 6,210,000 were sent East, arriving in good condition and with a small loss in hatching. The remainder, when developed, will be placed in the Sacramento river. The eggs shipped East were put up in packages of 50,000 each, in alternate layers with damp moss. They were then packed in crates in pairs, surrounded by stuffing to prevent jarring. The total weight of the consignments was over 20,000 pounds; the bulk of the eggs alone was 80 bushels.

Apiary.

Apiculture in California.

A correspondent of the *Journal of Bee Culture* gives his account of his last year's experience at Anaheim as follows:

I commenced here the 5th of last May, with 144 swarms in the old box and Harbison hives, many of them new swarms. As the swarming season here is in March and April, you can imagine how much of the season had passed before the 5th of May. After that time I had to send for my hives, etc., so that I did not get through transferring before the 1st of June. I have increased from these 144 hives to 305, and have taken 20,305 pounds of honey. I expected to have reached 30,000, but calculated too much on honey dew this fall. However, there are 4,000 or 5,000 pounds in the hives now that I will take out. So you see I have taken on an average fourteen and a half pounds per hive spread to that the whole apiary, and I assure you that many of them were in anything but good condition when they were transferred. I have taken in one day, without an assistant, 1,170 pounds of honey, and with an assistant, 1,800 pounds.

My apiary is arranged on a smooth piece of ground, constituting a bench about twelve feet above the land below. The bee house, or honey house, is built on the edge of this bench, or in the bank; so that we can go from the ground of the apiary into the second story of the building where are the extractor, stove for heating water, a small tank, holding seventy-five gallons, etc. In the lower story are the carpenter's tools, bench, etc., the large tank, framed in one corner of the building, stout and strong, boarded up and lined with zinc. This tank holds about 1,000 gallons, is in the southeast corner of the building, and is exposed to the sun by a window on the south side of the upper story. It is covered with a fine wire gauze, and is protected with a partition in the upper story from dust, dirt, etc. The honey is first put into the small tank, where it stands until the trash that naturally gets into it when extracted all rises to the top, when it is well skimmed and the honey drawn off into the large tank below. The object of the gauze cover and exposure of the large tank is to evaporate the honey thoroughly before putting up for market. The honey is draws from the large tank into cans, barrels, etc., for market. The arrangement of the apiary is in paral-

lel rows, eight feet apart, with hives six feet apart in rows, fifty in a row, twenty-five each side of the door to the honey house. My intention is to have an arbor of grape vines for each double row of hives, the rows of posts for trellis eight, and vines six feet apart in each row and each double row, or arbor, to be ten feet apart, the rows running north and south, and hives sitting just under the edge of the arbor, with openings outward, or, the hives on the east side opening to the west. Then I can go under the arbor and between the rows of hives, and be behind each while I work with it. This I like better than any other arrangement for I am always under shade and away from the bees.

I have this season had a temporary shed made by throwing brush overhead, but I intend that the vines shall take the place of brush. My intention is to provide for 500 swarms. This, you see, will take five double rows with 100 hives in each, or fifty hives in each arbor on each side of the avenue leading to the door of the honey house. Thus, you see, I have an apiary of 500 hives in a space of 300x90 feet. The apiary being on higher ground than the front part of the lower room of the building. I am not troubled by the bees in driving a team up to the door to load or unload. My intention is to keep not over 500 colonies in one place.

I expect to go ahead of this year's returns next season. This has been a very poor season, they say, and I suppose it has been much worse than usual, but I will be satisfied if all average with this. I have a little idea in my head by which I expect to go far ahead of anything I have ever done with bees. But I will wait until another season is over before I tell it, and if I make more honey per colony next year than any other man in the United States—well, what then? And this is exactly what I intend to do. I will commence next year with 200 colonies (as bees I handled this year were not all my own). I do not make any calculation on wintering, as bees gather honey the year round.

Can you suggest any plan by which we Californians can realize more than ten cents per pound for nice sage honey? It is better than the white clover honey of the East, and it is a shame that we do not get more than ten cents for it. Our second rate honey is about like the golden rod or smart weed honey of the East, and we get seven cents for it. I have now about 12,000 pounds of nice honey that I would take twelve and a half cents for, and deliver at the depot.

FILLING THE HIVE.—A writer on the subject of how the bees fill their hive, says:

As soon as the central cell is one-eighth of an inch deep, the queen lays an egg in it. She then goes around on the opposite side and lays eggs in the three cells that are built from the base of the central one. She then returns and deposits eggs in the six cells surrounding the first one, and continues to keep the cell on both sides filled with eggs, as fast as they are ready to receive them, thus establishing the center of her brooding nest at the center of the comb structure, and when the comb on each side of the first is brought opposite the center she embraces them in her circuit, thus giving her brood-nest a globular form.

The honey-storing bees keep the store cells above filled with honey down to the brood. As the sheets of comb are widened they come down lower, and as each additional comb sheet is built they occupy more of it, thus storing the honey in an arch or dome over the brood.

The work must progress and will continue in the same order for twenty-one days, if the space be large enough; at which time the brood nest attains its full size, for at the expiration of that time, the cells in the center, first filled with eggs, are vacated by the maturing bees, and the queen returns to the center to refill them with eggs; and as they are emptied in the same rotation in which they are filled, she continues to follow them up, going over the same ground every twenty-one days.

The completion of the brood nest does not stop the comb-building. That continues as rapidly as ever, but as it is not filled with eggs by the queen the honey-gatherers keep it filled with honey, thus surrounding the brood with honey.

Around the brood on every side, and below, there is found a border of cells that are neither filled with brood nor honey, but are partly filled with bee-bread.

AGE OF BEES. The queen passes the period of about three days in the egg and five as a worm; the workers then close her cell, and she immediately begins to spin her cocoon, which takes her from twenty to twenty-four hours. On the tenth and eleventh days, and perhaps a part of the twelfth day, she seems to be exhausted by her hard labor. She now remains in almost complete repose; she then passes four or five days as a nymph, and on the fifteenth or sixteenth day a perfect queen is attained. Much depends upon the strength of the colony and the heat of the season, which will vary it from one to two days.

The drone passes three days in the egg and about six in the worm, and changes into a perfect insect on the twenty-fourth day after the egg is laid. Much depends on the strength and heat of the colony, which should be about 70 degrees Fah., for their speedy development. They lay in rather a dilatory state for several days after they hatch before taking wing.

The worker spins its cocoon in thirty-six hours. After passing three days in the egg in this state of preparation for a new life, it gradually undergoes a great change, and becomes armed with a firmer body, with scales of a brownish color, and somewhat fringed with light hairs. On its belly it has six rings or scales. After it has reached the twenty-first day of existence—reckoning from the egg—it comes forth from the cell on the twenty-first or twenty-second day a perfect insect, and is termed an image.—*Practical Farmer.*

HOW TO FILL EMPTY COMB.—A correspondent having asked Mrs. Tupper the following question, "How can we best fill a number of hives of empty combs with bees? We have ten living colonies, healthy, though weak, and twenty-nine hives full of comb," she replies through the *Iowa Homestead* as follows: The best way to fill up your comb is to watch the bees when warm weather comes, and every few days put one empty comb between two that the queen has filled with brood. In this way you will soon have any hive full of brood, if honey is plenty; if not, you must feed quite liberally with sugar syrup. There will be no trouble in getting your hives all full of bees again if you manage in this way. If the season is good, it may be necessary for you to extract honey frequently from the comb, to give the queens room. I have followed the above plan successfully for a number of years, and can therefore recommend it.

CALIFORNIA HONEY. Among other numerous products for which California seems destined to become famous, honey ranks as by no means the least valuable item. It has already found its way into the eastern markets, though so far in limited supply, and is much admired for its purity and delicacy of flavor. Its production is not limited to any part of the State, but at present it is chiefly made a specialty in San Diego county, near the Mexican border. The honey crop of that county for 1863 was 119,000 pounds, and it is expected that it will this year reach 200,000 pounds. The bees commence working in that county about the 1st of February, and the season for storing honey lasts from June to September. The finest honey is made from the flowers of the sage, which grows there in such abundance. This is the true sage plant, and must not be confounded with the "sage brush" of Nevada and the northern counties. The flat top or "buckwheat greasewood" also affords excellent honey. The bloom of this plant closely resembles that of buckwheat, hence the name. The flower of the sumac is another source, and the ice-plant, which covers so much of the country, is likewise much sought by the bees.—*Farmers' Union.*

HONEY.—The Ventura *Signal* of January 25th says: The production of honey has in the past, in this county, proved quite remunerative, and we are pleased to observe that our bee men are taking great pains to place their honey in the market in the best possible shape, and will thus make still more from it. It is a source of revenue which increases in importance each year. It is impossible to flood the market with such honey as is produced where the white sage abounds.

W. H. SEWARD'S ENERGY.—Judge S. gave his son $1000 and told him to go to college and graduate. The son returned at the end of the Freshman year without a dollar and with several ugly habits. About the close of vacation the judge said to his son, "Well, William, are you going to college this year?" "Have no money, father." "Very well, my son, I gave you all I could afford to give you. You can't stay here; you must now pay your own way through the world." A new light broke in upon the vision of the young man. He accommodated himself to the situation; left home, made his way through college, graduated at the head of his class, studied law and became Governor of the State of New York; entered the cabinet of the President of the United States, and made a record for himself.

TRIAL OF FARM IMPLEMENTS.—Mowers, rakes, reapers, tedders and horse forks were last season publicly tested at Elmira, N. Y., under the auspices of the Farmer's Club of that place. Twelve mowing machines were entered, including the Wood, Union, and Sprague. The *Country Gentleman* says the committee on mowers, five in number, found on comparing preferences that *each had voted for a different machine*, and hence no agreement as to the best was reached. On rakes, the preference was awarded to the Coates; on reapers, to Hubbard's Meadow Lark; and on tedders to the Bullard.

IMPLEMENT TRIAL AT THE CENTENNIAL. The Centennial managers have secured the use of nearly fifty acres of good land on the Philadelphia and Trenton railroad near Schenck station, which they propose to devote to an international trial of agricultural implements of all kinds. The Centennial Agricultural Bureau has already had this tract plowed so as to be in readiness for next year.

Women.

The Farmer's Daughter.

BY ANNIE L. JACK.

She lives within a quiet home,
No model of the graces,
Unknown to culture's higher walks,
Or fashion's giddy places:
A thoughtful girl, so sweet, so wise,
With earnest face and loving eyes—
The farmer's gentle daughter.

From morn till eve the little maid
Is busy at her labor;
She sweeps and dusts the old farm house
And helps a poorer neighbor.
No gossips will she listen to
(A merit rare, I own you),
So lives the farmer's daughter.

On baking days her tiny hands
Are busy at the making;
No bread more light and sweet than hers
Was ever made by baking.
She churns the butter golden, sweet,
And keeps the dairy white and neat—
The farmer's useful daughter.

Her garden is an Eden fair,
A bloom with pinks and roses—
She knows the name of every flower,
And makes some gorgeous posies—
Grows peas, and radishes, and cress,
And corn, and squash, and herbs to press—
The farmer's happy daughter.

Long may she bravely smile on us—
Our darling housebold fairy,
The queen of garden, house and lot,
And princess of the dairy—
To teach us by her pleasant way
To love the things of every day—
God bless the farmer's daughter.

OPEN LETTERS TO WOMEN---NO 1.

BY CHARLOTTE.

AMERICAN SOCIETY AND ITS ISSUES.

DEAR EDITOR: It is difficult to fairly reach the varied interests of our sex, so much has been said and written prejudicial, not only only to us especially, but to humanity in general. It is through both masculine and feminine influence upon coming generations that humanity is to be perfected and completed, thereby fulfilling the Creative Mind's purpose in making a world and peopling it with men and women.

In Miss Emily Faithful's thoughts, there is much of truth, strength and practicality. What is true in England, is also true in America of women as a class to-day. But Miss Faithful got at the right way of remedying past and present evils, conditions and circumstances over which heretofore we have had no control. Our country and our time demands that we unite, laboring from her standpoint, and in her department of the great work, education and elevation for women, or woman's "real needs," as she expressed it.

And now, as we have introduced ourself, we want to ask the close attention of all our sisters to whom this may come, simply as earnest talks about ourselves and our association in the various economies of life, in which drama we are such important actors. We wish to speak strongly and feelingly, and trust that our language will be plain and pointed.

Phrenologists tell us that man (we use the word generically) "is a social animal." And truly it would seem, when human thought, expression and action are viewed metaphisically—taken together with all its consequences for good or ill—that sometimes the word "animal" is indeed befitting. But we seek not to be sarcastic. The mind grows upon what it feeds, therefore we cannot tolerate Dean Swift's odious carricatures, nor with him believe that to hold up, or keep before the public, vice, immorality and coarse-

ness, will disgust the mind to the forsaking of all that will vitiate, blunt, or destroy the finer sensibilities.

Our own emulation is the Addison school, believing that the holding up before all people truth, purity and beauty, all that refines, elevates and touches, will at last bring about purer morals, finer feelings, more tender and beautiful examples of human love and human sacrifice.

Especially do we realize this when we consider that much of what the world contemns is only in the seeming—that, from its very nature, evil must destroy itself eventually. We would not say that the immortal Dean's proclivities were vile or ignoble, but his greatest forte seemed to be in exciting the more comprisibilities of his readers by rather indelicate, vulgarly-spoken comparisons and allusions. However, all this is neither here nor there for the question before us, viz.: social association, interest, merit, demerit, and consequences, which takes in both sexes equally, with only this difference, viz.: that there are involved by far the most largely and lastingly, feminine morals and perfection.

First—It is very gratifying to contemplate *true womanhood*, the sublime mission and responsibility of the feminine soul; but we do not love to think of our sex's enslavement to fashion, pride, frivolity, and often inexcusable ignorance. And we may deserve sometimes to be told of these faults with censorious harshness, but in person we must protest against Gail Hamilton pitching us all about so summarily, although she says many thing only too true, and many a gem of thought flashes from her potent pen, yet she is too caustic. Also wise Dr. Holland, of *Scribner's monthly*.

We cannot all be Martha Washingtons, Mrs. John Adamses, Isabellas, Queen Elizabeths, Victorias, and Cornelias, mother of the Gracchi. Why? Because circumstances, fortunate or unfortunate, govern the world. Those whom fortuitous chance makes rich, are the ones to bear the blessings and helps can be cultivated, refined and intellectual—*they* can accomplish a mighty work in the domestic and social realm. Such wives, mothers, sisters and daughters are "the cities set on a hill." But those women to whom life is unavoidably nothing but a tread-mill of deprivation of all educational influences, bringing to them poverty, toil, hardship, disappointment, obscurity and destitution, whose very existence the beast of burden is which keeps the mill revolving—*these women!* what can *they* do toward begetting men and women of God-like souls, great intellects, exhaustless patience and affection?

We are told that "it is the father's place to provide the material of the household; the mother's, to train the intellectual." But these women—*these women!* how are *they* to train the intellectual? They who often and often have neither time to eat or sleep sufficient for physical, mental or moral growth, and of whom the full half (including all nations and countries) can neither read nor write, who are unable to think of anything beside inexorable tasks, the endless chain-power which compels stepping, stepping, ceaselessly stepping, but getting no farther on—these are the candles destiny lights and places "under a bushel."

Dear ladies, let us not be understood as charging the blame of the existence of poverty, crime and misery upon any class, any community, or individuals, as abstract cause. The bare *fact*, none can prevent; but it is with its details, its amelioration, palliation, extent, and control that we, the differing casts and classes, have to do. It is in keeping evil down—destroying it—that men and women ought to be interested, earnest and vigilant. Overcoming evil with its opposite, is the great work of men and women to-day and henceforth, because everything good and god-like depends upon virtuous action.

But it is indeed true that too many of us who can labor for human regeneration have too long been content to seek amusement in fashion, ostentation and rivalry. Our mania has not been very severe for self-elevation and mental acquirements — perquisites stronger and more enduring than was ever "a love of a bonnet," latest styles of apparel, or faultless coiffure. Feminine excitements are generally not of a high character to educate and develop, in a proper direction, the masses of women for any and all exigencies of individual thought and action.

Masculinity, too, has had a large influence in making our character what it is—an influence which they are beginning to see and to be ashamed of. Sentimental philosophy holds out the seductive idea that woman is man's treasure, his charmer, his hope, his pride; but as yet it helps us very little to find out why we are of so much value, and how a correct valuation of ourselves is best attained.

We must not longer deceive ourselves with the impression that men's respect and esteem is secondary to their love and admiration, and to secure these last, the truer, better feelings must be suppressed, allowing the inferior in human nature to be the only requisition as aids and counselors.

We should always speak the truth, and confess that their admiration, their love, is of immense importance to us; but it is a vital mistake to suppose that, in order to possess it, we need only know how to make superficial little speeches to them—to flirt, fascinate, and lead captive by "physical eye batteries," instead of real, intellectual, earnest soul-power.

High mental preferment should beget a more lady-like bearing and attractiveness, enhancing appreciation of social and sexual relations; and, certainly, that woman who excels in piquant brilliancy, where desultory badinage is requisite, passing easily and ably to graver, profounder themes, bringing out depth and strength of soul-endowment—surely *she* can, and must, call forth a greater degree of reliable admiration from the masculine—add zest to pursuit -enjoyment to possession.

What, pray, in all ages has made, and at present makes women what they are? Will men or women deny that it is the ignorant oppression—narrow selfishness—a want of intellectual culture, induced by the prevailing habit in American society among men of indulging and humoring the weaknesses and foibles of woman, and requiring too little mentality of them?—a course most unwise, depreciating and ignoble—the *real foundation* of what, in later times, has become known as masculine oppression, injustice and wrong. Out of this habit comes another danger, of which we will speak at another time.

Taxation Without Representation.

We have always regarded *Harper's Magazine* as very conservative upon the question of woman's suffrage. In the March number of this excellent monthly we find, in the "Easy Chair," the following, which our *better half* requests us to quote as very much to the point, and of interest:

Last year, when the celebration of the Centennial anniversaries began at Concord and Lexington, some of the sincerest and most faithful friends of fair play for women declined to take any part or interest, because Concord Bridge and Lexington Green, they contended, are famous for the defense of a great principle, which, these protestants insisted, those who managed the celebrations resolutely opposed. This principle was one of which we shall hear very much in this Centennial year—that there should be no taxation without representation.

Sundry ladies have recently been urging this rather familiar American principle upon a perplexed committee of the New York Legislature. The Chamber was crowded, as it always is upon such occasions, and the ladies had it all their own way. The Easy Chair does not say this "gallantly," but sincerely, for there is no adverse argument. When we, either consciously or ignorantly, permitted women to become owners of taxed property in fee, we surrendered the case.

If a stupid and drunken man, owning a handsome estate in the country, may have a voice in the selection of the representative who is to lay taxes upon it, why should not his next neighbor, an intelligent and sagacious woman, owning a larger estate and paying taxes upon it, have an equal voice in the selection of the imposer of the taxes? Does the fact of sex destroy the principle? But is the Centennial year famous for the vindication of the political doctrine that male taxation and representation should go together, or simply that taxation and representation should be so united? Did Sam Adams, or James Otis, or Patrick Henry, or John Jay, or any of the heroes of '76 qualify the assertion of their principle by any word denoting sex? Or, when they declared on a certain famous day that all men were created equal, did they mean, as was gravely contended by so "practical" a politician as Mr. Douglas, that white men only were so created, and therefore?

But certainly they meant white men, interposes the objector, for at that very time they held black men in slavery; and certainly, he says, they meant male taxation, because nobody ever thought of a woman's voting. The Easy Chair once heard the ladies arguing for this claim in the same Assembly Chamber in which the perplexed committee lately sat, and the committee of that earlier day were equally perplexed. The members smiled good humoredly at the absurd claim, and they responded "gallantly" to every question, and were quite willing that the "good ladies should have their say." In the Speaker's pulpit stood Mrs. Stanton in the summer evening, tranquilly fanning herself, and with candor and force and good nature asking the terrible questions, to which no member of the committee had any other distinct reply than that the suggestion, if made in earnest, was simply preposterous. When any one of them remarked that the actual circumstances and practice of the men of the Revolution showed that they had no thought of such an application of their principle, Mrs. Stanton asked, with an amused smile, whether, as philosophers and logicians, they ought not to have thought of it, and whether their blindness was a reason that we should refuse to see? If men proclaim a principle of action which by its very nature is gradually seen to be more and more embracing is its operation always to be limited by the narrow vision and selfish aim of those who promulgate it? If, she asked, gently waving her fan, as if to scatter mosquitoes—if, gentlemen, representation should go with taxation, ought not all intelligent and moral native tax-payers to have a voice in the choice of the representative? One of the committee, who declined to go into the corner, murmured, "Not if they are women." "And why not if they are women?" "Because God did not intend that women should vote." "And where does He say that He intends that men should vote?"

There was one woman a hundred years ago who is perhaps the most famous woman of the Revolution, admirable in every capacity of woman's peculiar sphere, and equally fitted for the common sphere of men and women in human society. This was Abigail Adams, the wife of one President and the mother of another. She at least was reasonable and logical, whoever is not. Writing to her husband, who was in his seat in the Continental Congress, on the 31st of March, 1776, this typical American matron says:

"I long to hear that you have declared an independency. And, by-the-way, in the new code of laws which I suppose it will be necessary for you to make, I desire you to remember the ladies, and be more generous and favorable to them than your ancestors. Do not put such unlimited power into the hands of the husbands. Remember, all men would be tyrants if they could. If particular care and attention is not paid to the ladies, we are determined to foment a rebellion, and will not hold ourselves bound by any laws in which we have no voice or representation. That your sex are naturally tyrannical is a truth so thoroughly established as to admit of no dispute; but such of you as wish to be happy, willingly give up the harsh title of master for the more tender and endearing one of friend. Why, then, not put it out of the power of the vicious and the lawless to use us with cruelty and indignity with impunity?"

Again, in the following May, she says: "I cannot say that I think you are very generous to the ladies, for while you are proclaiming peace and good will to men, emancipating all nations, you insist upon retaining an absolute power over wives."

The tone of affectionate gayety and feminine dependence does not affect the deep and sweet seriousness of passages that show how penetrating was the glance of this admirable woman. Indeed, she but expresses the instinctive feeling of most of the noblest minds and hearts of her sex. But Mrs. Abigail Adams would have pleaded in vain before a committee of the Congress in which her husband sat. The smiling and affable chairman would have heard her courteously, and would then have replied: "Dear and respected madame, when women show that they feel the deprivation of the ballot to be a grievance, this Congress will take the subject into serious consideration. You must excuse us if we cannot regard your individual views and wishes as those of your sex. We are inclined to believe that most of them would consider the ballot to be an oppressive burden imposed upon them, not a desirable privilege. Home, not Congress, is the sphere of woman, dear madame—at least that is our opinion, and that seems to have been the universal opinion and practice of mankind. You and your fellow-petitioners, dear Mrs. Adams, have leave to withdraw."

This is very much the speech that the affable chairman contrives to make, if he makes any. Its argument really is that no political reform should be made until the wrong to be corrected has become so intolerable that is a general cry and protest. Nothing must be done in regard to the relations of capital and labor until

the peace of society is evidently imperilled. Nothing must be done about slavery until the chain eats into the flesh and wrings a cry of agony from the lips. No measures must be taken against pestilence until it is decimating the population. Statesmanship is never to try to prevent, but only to alleviate when political disease has become desperate. Foresight, sagacity, comprehension, the salvation of the state from the moral deterioration and the economical loss of acknowledged abuses, these are not to be considered as elements and purposes of political wisdom. The practice of ages and of mankind is to be our guide, as if it would not justify every enormity and folly. Home, not somewhere else, is the sphere of woman, as if the only condition of home to most women were not that they should toil somewhere else. Finally, the intelligent should not be allowed to do what the ignorant do or wish to do. The affable chairmen must do better than this. Their wisest way is to smile only, and not to attempt to answer Abigail Adamas, under whatever name she may appear.

Household Reading.

Home.

BY GEORGE SWAIN.

Home's not merely four square walls,
Though with pictures hung and gilded;
Home is where affection calls,
Filled with shrines the heart hath builded.
Home! go watch the faithful dove,
Sailing 'neath the heaven above us:
Home is where there's one to love us!
Home is where there's one to love!

Home's not merely roof and room—
It needs something to endear it;
Home is where the heart can bloom,
Where there's some kind lip to cheer it!
What is home with none to meet,
None to welcome, none to greet us?
Home is sweet—and only sweet—
Where there's one we love to meet us.

UP-COUNTRY LETTERS---NO. 4.

BY RACHEL A. ELY.

CHANGE and motion, it is said, are the eternal laws of nature, and we mortals' lives are no exception to her rules. Scarce had I taken a deep breath of air invigorated by mountains, into my weary body, when my good, kind hostess was taken dangerously ill. As I feared, a long account was to be settled with over-taxed nature. And, as they were dependent on the friendliness of neighbors to care for her and the children, I felt it best to find a new home. So here I am, in the sunniest, cheeriest spot imaginable. Already I feel the calm, quiet atmosphere of peace which pervades the household. My room is a southwest one, consequently always sunny, my new hostess and friend says a sick room always should be. The west window opens on the porch, over which the delicate and fragrant honeysuckle and clustering grape vine will soon make a bower. Already I see traces of their work—swelling of buds and the like.

In my new home I have teacher and physician combined with hostess and friend. Oh! why are there not more of such in the world? But I shall confuse you, perhaps,—and myself, too—unless I quietly paint my new life, and the new hopes and worlds of usefulness which are opening to my view. Five children and one hired man, besides the father and mother and myself, constitute our family. And, though farmers, they have but two meals a day. Meat once or twice a week; no tea or coffee, but chocolate, or a gruel made of oatmeal or Graham flour, or boiled cocoa shells, every morning instead. But the children prefer, as do I, fresh, warm milk. The Graham rolls, or gems, or corn cake, are truly sweet and delicious. My good hostess seems amazed at the ignorance and folly of the country people generally in not eating it more. Then fruit is a staple article of diet at each meal, and the vegetable garden, kept the year round to furnish something green each day, is indeed a blessing. But what surprises me most is the ease with which this woman performs her daily duties. To be sure, she wears a short dress, and has only to get two meals a day; yet that can't really make such a difference, can it? Let me see—breakfast at eight, at which all the children but baby are dressed neat and clean, and ready for school. On the table is a big dish of Graham or oatmeal mush, boiled or baked potatoes, a pitcher of fresh cream, warm milk, a plate of golden butter, and another of hot gems, with a fragrant glass of fruit, canned and most luscious to behold. Surely a breakfast for a king—and easy to get, too. The men have done their chores and been at work an hour or more, and now come in with hearty appetites, as do we all. The children go to school, and the mother, whose tasks are already in part done, gathers up the dishes, and as she has a sink and water handy in it, a permanent boiler on the stove also, which the man fills each morning, it is but a trifle to wash, wipe and put away the dishes in the closet at her right hand, not a step away. Meantime I sit in the sun by the open door and watch the quiet, happy baby, who has taken care of herself so long on its own rug on the floor, and begin to frame a world of questions to ask this woman as soon as baby is bathed and dressed and nursed to sleep. The children do not return from school until three, so that we dine at half-past two, they getting in by the time we are only *quietly* hungry, and can listen to their day's mishaps and joys. The dinner is composed of two or three kinds of vegetables, cold rolls or loaf bread, fruit, and a pudding of some kind, and always a truly lovely boquet of fresh flowers, gathered by the children on their way from school or from the front garden. After this meal the two eldest children clear away the table, wash and wipe and put away the dishes, while the mother continues her sewing and the others play with the year-old baby. A lunch of bread and fruit, after the day's work, is socially set in two dishes. Such is the daily routine of this household, except washing-day, which she has a way of turning off in the same easy manner.

I really forget my own aches and pains, if I have any, in these days, so busy are my thoughts in questioning wherein this little woman is superior to the other, and to most every wife and mother in the land. I have about concluded that she not only has brains, but uses them—applies them to her daily life, and practices what she preaches. And this is the woman I have heard sneers about—short dress, hygienic woman doctor, strong-minded woman, and many more less becoming epithets! Well, I myself should not have known her worth without this chance, which has made me a silent spectator of her family and its workings.

GRANDFATHER'S LETTERS---NO. 7.

AUNT MARY'S REPLY TO INGLEWOOD.

Dear Inglewood: True, we cannot but coincide with you in thinking—yes, and knowing how necessary is congenial, suitable companionship in life's journeyings. With every word you say on that subject we heartily agree; but with all this there yet remains an individuality that, under certain conditions and circumstances, must still remain intact. You may have yet to learn how much your own individualism may be merged in that of another, and how much that other's may be merged in yours; and what is to be the result when they will not thus merge together? Ah! I know you men, prior to marriage, during the courting season, feel like giving in to every suggestion of your lady love, but the case becomes too often sadly altered afterwards, when imperious self-will seems to usurp the place where formerly love for that other reigned supreme, and self was but of secondary consideration. True, we admire masculine supremacy and the right to reign in its legitimate sphere, but there it must be kept; just so of the feminine supremacy, that also must be kept to its legitimate sphere, all subject to that higher law of our nature in the intellectual, moral and spiritual, and love, pure and holy love, presiding over all.

Ma and I, and even Angie herself, every one of us, feel the importance of the event to which you allude, and if the young felt it as we older ones do, doubtless more would be restrained from entering upon it. However, nature asserts her own rights. I rejoice to see those who recognize those rights, in the highest departments of their natures. As to those rights, Mr. Inglewood, I appeal to you before you proceed further, when you come to discover that Angie's individualism differs from your own, and in some cases cannot be brought to merge into yours, how will you take it? We claim for Angie some rights of body and soul that no earthly power may take from her; for the former, the due preservation of her health, and for the latter, its salvation according to her peculiar notions of that subject. Your notions might take a turn quite different from your own ideas on those things. If so, can you still say, "My beloved Angie, your health and your salvation are as dear to me as to yourself. Do as you think best. I forego all in your favor, so long as you do not require a tour to Europe for the former, nor a hundred-dollar mass for the latter." Of these extreme cases, truly there is no danger, but I cannot say if there may not be something in that direction that may require, on your part, some self-control, and self-abnegation enough, at least, to subdue that imperious self-will and treat that other individualism with the courteous, loving-kindliness of manner that you would like to have meted out to you in like circumstances. Now is the time to think over these things, Mr. Inglewood.

As to that to which you refer "the physical conditions and circumstances," you authorised by ma and Angie to say if the soul affinities are all right, they will not fear for the other, but trust to that good providence that always rewards the energetic and industrious, and trust if Angie's present state of health continues, she may have heroism enough to take her own position on life's great battle field, and mutually aid her companion in his arduous efforts for victory. And here let me say to you, either as an accepted lover or a probationary one, never use deception; be frank and true in all your statements; abhor deception as you would a lie, and when you have fairly won that heroine from a pure good home, who can say "what is good enough for you is good enough for me," and you have the tact to retain that love all your life long—and it will be your own fault if you don't—you will have won a prize of which you may be proud till your dying day. Truly, your friend,

AUNT MARY.

WHAT YOUR NEIGHBORS KNOW.

BY ELIZA E. ANTHONY.

If you wish to find out anything about yourself, ask your neighbors; they will be sure to know. They can tell whether you live happily or not; and, of course, it would give them more food for reflection if you did not. They know how many visitors you have, and will peer through the window-shutters for hours, in the hope and expectation of finding out some news. If you venture on the street in a new suit, your neighbors wonder how many more new clothes you are going to buy, and how your husband can get along with such an extravagant wife; and, with raised eye-brows and pursed mouths, they will shake their heads and exclaim, "Poor man! how I pity him; but you couldn't expect much else from her." If you venture out without your spouse, your neighbors are on the *qui vive* to find out where you are going, and whom you are going with. One will say that you are a flirt; another will repeat it, with the *addenda* that you have left your confiding spouse, and so on, until the mole-hill becomes a mountain; but endeavor to trace it back, and you will get no satisfaction but "They say." If you are single, your neighbors wonder when on earth you are going to get married, and kindly (?) add that you have tried often enough, but always failed—and no wonder. For their part, they could not see what there was attractive in such a looking specimen as you were. Now if it were their Ella or Rafella, the men would be sure to propose; but you—bah! you were cut out for an old maid. When you are married, your neighbors all flock in, and pry and peer into this room and that closet, and praise everything, from your husband down to the feather pillows. But, after they have left your house, they compare notes. One says, with a sniff, that the curtains were only cheap, cotton lace; another, that the table-cover was actually darned; a third, that you need not put on such airs, for your carpet was only ingrain, after all; and she didn't see why you had so many hanging baskets and vines, unless it was to catch the dust; and then they all groan, and say that you will come to the poor-house, and you deserve it for being so extravagant, and they pity your husband for being so foolish and indulgent, and only wish they had control of you for a short time. You are entirely too independent and don't-care in your manner to suit them. Wouldn't they like to sober you down? Oh, no! If you visit the post-office oftener than once a month, your neighbors wonder who you correspond with. There must be something wrong, and your spouse ought to know it. For they actually saw you receive six letters at one time, and gracious knows how many papers. The idea of a married woman receiving that many letters more than once a year, and then *such* a bundle of papers! For their part, they can't find time to read the papers, they have so much else to do (i. e., gossiping), and think a woman must be crazy to want to know about affairs all over the world, and don't see what earthly good it does you to know about current events. They don't understand how you can perform your household duties and also write for the papers; but of course your husband comes home and sits down to a half-cooked meal, while

you are writing "The Trials and Tribulations of Timothy Toodles, Esq.," with your hair dishevelled, slippers down at the heel, and fingers stained with ink. But if they happen in at meal time (as they generally do), and find you presiding at a well-laid table, with no signs of ink about you, they say sweetly, "What an admirable house-keeper you are, my dear; your husband ought to be proud of you."

A good neighbor, in whom you can confide and trust, is a jewel of untold value; but from people who are inquisitive, deceitful, and fond of slander and gossip, may the Lord deliver us!

Santa Cruz, Feb. 1876.

THAT LETTER FROM ITALY.

"Who is the European correspondent? His 'Letter from Italy,' in March number, is certainly most interesting and entertaining." This question asks a contributor. We gave his name with the letter. Mr. James S. Lippincott was one of the editors of the American edition of Chambers' Encyclopædia, and has attained a high standing for literary ability. Now, a ripe scholar, he is spending his time in scientific pursuits and recreation, in traveling. While in California, he made extensive collections of plants, and his good wife, who always accompanies him in his travels, paints all the most beautiful and strange flowers and plants in a most natural style. What he designs to finally accomplish in this direction, we know not. But this we do know—while in California, we found him and his wife, personally, to be very modest and unassuming, yet companionable and warm friends.

We will add to this a portion of a private note which came with his excellent letter:

"Naples, January 21st, 1876.

"We have been in Europe about eight months, and purpose to pass eight or nine more, and have greatly enjoyed it, though it is my second visit. Switzerland is a glorious country, rivaling Colorado and California in scenery, and Italy is full of interest. A month at Florence and a month at Rome were filled with pleasure. I submitted the paper on crossing animals in your paper to our best zoologist, who pronounced it a canard, as several of the animals employed had not been imported into Europe. The copies of the Agriculturist sent me have been read with interest by some of our fruit growers."

We will state that the article referred to in the above, "crossing cattle," is the one that appeared in March, 1875, under the heading "Cattle Hybridization," giving the experiments of Mr. Adraanzoon Van Koppenael, near Leyden, Holland. We credited the article to the *Rural New Yorker*, and it to the *World* as furnished by a Brussels correspondent. If the experiment is a *canard*, the writer certainly shows ability for ingenious originality and cogent reasoning that would deceive the wisest and most experienced cattle breeders. We regret the article was not really true.

FAMILIAR TALKS---No. 9.

BY SNIP.

The author of "Up-Country Letters" tells of a woman who is always at work, and the majority of those who live on farms seem to belong to that class whose work is never done. But there are some housekeepers who, apparently, always have their work done. No matter what time of day it may be, you will not find them at work, except just at meal time. One such I was acquainted with, and one day she told me how she managed. All her work was done before breakfast. The washing must be done on Monday, rain or shine. She got up at half-past three or four o'clock, soon as possible got to washing, and not until it was all done did she get breakfast. The next day she was up at five and did the ironing before getting breakfast, and so with all her work. I did not wonder that she was delicate. The strain upon one's system by such a course cannot be small. For in the morning the stomach is empty, and the system needs sustenance before any very hard work is undertaken. Dr. Hall, one of our great sanitarians, writes very strongly against exercising much before food has been taken into the stomach in the morning. To return to the wash-tub: I prefer to do my washing on Tuesday, in pleasant weather; at other times, just when the weather permits. By washing on Tuesday, I can put the clothes to soak on Monday evening. I heat water and make a good suds, and the clothes wash much easier than if they had not been soaked. The most of the people rush into the washing as soon as the breakfast table is cleared, and after bending over the wash-tub two-thirds of a day, have to sweep, make beds, and wash the dishes. I used to follow that plan, but for more than two years past have taken the opposite course—do all my housework first; then, when the washing is done, I can rest at once. To be sure, I am a little late getting my clothes out, but I never care for that, for I know that as soon as the washing is done, I shall beat liberty to rest, read or write as I may wish.

I hope "Grandfather" has not deserted us, without telling us what became of Inglewood and his love-making. If "Grandfather's Letters" are a true recital of love-making a century ago, I think it must have been a queer affair. But few gentlemen now would receive a favorable answer to their suit if they were afraid to tell who they were. Neither would many girls put the matter into Aunt Mary's hands. Perhaps it would be better for a good many of them if they would, for so many of them do not attach the importance to marriage that they should, but seem to regard marriage as the great *desideratum* of woman's life; never stopping to think of the years to follow, with more trouble and sorrow than they dreamed of during their girlhood. But what use of talking to them and telling them not to be in a hurry to get married? They only think that those who talk so are old fogies.

FRIENDLY LETTERS--No 2.

BY MRS. M. E. T.

A REMARKABLE MENTAL CONDITION.

Alone, with not a sound to break the stillness of a quiet Sunday evening, save the regular tick, tick, measuring time's unceasing march, I find my thoughts wandering here and there, in a strange sort of way, at mystifying whys and wherefores.

There is so much to worry us; so much that we mortals cannot understand, that no wonder the mind grows bewildered, and is lost in the vain endeavor to solve some perplexing theory.

It was this peculiar mental condition, "a mind diseased," of which I was last thinking, when the desire came over me to relate to others the strange freaks of one I well knew while laboring under this mysterious malady. The story is quite true, and may prove interesting to the readers of The California Agriculturist.

My first recollection is of a pale, sad-looking woman, whose dark, mournful eyes deeply touched my childish sympathy. Ever in the same little corner I saw her. Day after day, year after year, she sat there, quietly spinning. Her little wheel seemed a thing of life to her—the recipient of all her silent affection. She never smiled, never spoke, save under rare provocation, and then only to utter the same simple sentence, "We don't be to know." We called her Aunt Polly; she was related to our grandfather, and for years his house had been her home. To my anxious inquiry about her, my mother said, "She is crazy."

As I grew older, and years passed on, I saw and heard much of this woman's remarkable madness. During a period of seven years she played this quiet role. She used only signs to express her desires, often displaying an ingenuity that was truly amusing. If sometimes, with a view to provoke her to speak, one made a feint of not understanding her sign, she would, after much patient trying, repeat her chosen expression, "Me don't be to know."

After seven years of quiet industry came a change of programme. Seven years jubilee followed instead. The idolized wheel was set aside. Silence no longer reigned supreme. Overflowing with life and spirit, Aunt Polly was a new person, made up of new material. She talked almost incessantly, day and night, her imagination supplying wonderful topics, to which her eloquence added a peculiar charm.

She was fond of visiting, and often made tours through the country calling on all and exhibiting a friendly interest in every one's affairs. At one place she found a rich old widower with two grown up daughters. Her sympathetic heart was at once enlisted in behalf of this companionless man and his motherless girls. A wife and mother were needed, and she resolved to fill the place, and persisted in entering upon her duties with all the dignity of a high-bred lady. The old gentleman absented himself from home for a few days, thinking she would soon tire of the new position. But she did not. She willingly stayed at home, giving orders on the big farm and carefully tending her children, just as any true wife and mother should have done, and much tact was called into exercise before she could be induced to leave. For a long time after, she called herself Mrs. K., and spoke of her daughters with much concern and affection.

Unlike many, I was glad to have her visit me. She exercised over me a kind of mesmeric influence that was truly enjoyable. I could sit for hours listening to her impossible stories; and to have her stroke my hair and pity my poor head, would send through my body a thrill of inexpressible delight.

Considered harmless, she was seldom deprived of her liberty, but came and went at will, keeping up a perfect round of pleasure and excitement throughout the seven years. And then, as naturally as the sun sets, she would step into her quiet self again, bring out the long-neglected wheel, and sit down for a seven years' rest—her countenance resuming the old sad look, and her tongue refusing to speak save only the old expression, "Me don't be to know." Thus, every seven years, this wonderful woman changed back and forth her manner of life.

She was, perhaps, about thirty years of age when, through some matrimonial trouble, her mind first became disturbed. She lived to the very old age of ninety years, her periodical changes continuing through sixty years with a regularity that passes comprehension. Surely no madness was ever more mysterious.

We cannot contemplate a diseased mind without a strange feeling of pity for the unfortunate possessor; and I often think there are more in this world deserving our pity than we are aware of. In fact, are we not all, more or less, in and out of our natural selves, according to circumstances?

A CHEERFUL LETTER.

BY BUSY BEE.

The Agriculturist comes to us freighted with interest, and with promise of even better things in the future. I placed the last year's Agriculturists on file before me, and read over the articles from the several correspondents, and found much both entertaining and instructive, and how much more may we look forward to during the present year?

"Snip" speaks of a farmer's wife who gets dinner in the middle of the day, and has a light tea about five o'clock. I have been doing so since last summer, and find it in every way more satisfactory.

I sometimes make what we call "minute pudding." I take a quart of milk—more or less, according to the size of my family—put in a little salt, and let it come to a boil; then set it off of the stove and stir in flour (I like Graham best) very fast until it is thick. I then make a sauce of butter, sugar, and an egg, all beaten up together, with a little flavoring of any kind preferred. We like it very much once in a while, and it is easily made.

"Aunt Polly" sends an invitation to the children. I wonder if she would not extend it to grown children, and tell us how to make pretty and useful household articles. Will she not invite persons to send descriptions of such things to her department, if the editor can give us the room? I suppose we should not expect everything in one paper, but I think this would be very nice. Just think how many pretty and useful things we could learn to make by next Christmas for our children and friends. I lately saw some little articles that pleased me very much. They were little brackets, made of perforated card board, hanging on the wall each side of the bureau. They were made in the shape of a horn of plenty, with lids fastended on the top to keep the dust out and hide that which was inside, and were to put the combings of hair and soiled ruffles, laces and colars in. I thought them very pretty and useful.

TO "M. E. T."

Ed. Agriculturist: I hope you will pardon a few remarks in answer to your correspondent "M. E. T." whose "Friendly Letters" are indeed what they purport to be, I feel to thank her for her words of sympathy, which invalids so well appreciate. But I would ask her if she is satisfied to endure pain and suffering without questioning the cause, or trying to regain health? While my eyes are now being opened to the new life—a life in accordance with God's (nature's) laws—in which there is health and strength if we obey, my soul yearns to spread the glad tidings, that others who are treading the path which leads to ill health, pain and misery, may take warning and retrace their steps ere it be too late. My hostess, teacher and guide encourages me in investigating and thinking upon these questions.

I wish "M. E. T." would tell us some

of her "mother's memories," for some of us big folks are only children grown big, with hearts and heads that enjoy the "Corner" as well as little folks, and I often wonder if it would not make us happier and better, to, if we all indulged more in the sports and joys of children.

RACHEL A. E.

Domestic.

Don't Take it to Heart.

There's many a trouble
Would break like a bubble,
And into the waters of Lethe depart,
Did not we rehearse it,
And tenderly nurse it,
And give it a permanent place in the heart.

There's many a sorrow
Would vanish to-morrow,
Were we not unwilling to furnish the wings;
So sadly intruding,
And quietly brooding,
It hatches out all sorts of horrible things.

How welcome the seeming
Of looks that are beaming,
Whether one's wealthy, or whether one's poor!
Eyes bright as a berry,
Cheeks red as a cherry,
The grasp and the curse and the heartache can cure.

Resolved to be merry,
All worry to ferry
Across the famed waters that bid us forget,
And no longer fearful,
But happy and cheerful
We feel life has much that's worth living for yet.

BY A NEW CONTRIBUTOR.

TO AGRICULTURIST: I am a farmer's wife, and have been a reader of your valuable paper two years, and I have gained a great deal of information through its columns. In the January number, a lady asks some one to tell her how to wash colored flannels without fading, shrinking, etc. I will give her my way: Make a strong soap suds with luke warm water. To each pail of water put in one tablespoonful of liquid ammonia. Prepare the water before putting the flannels into the tub. If necessary to take them through a second suds, add only half the quantity of ammonia the second time. Rinse through warm water.

I also have a good receipt for washing calicoes to prevent them from fading. If any of the lady readers would like the receipt, they can have it by asking through the AGRICULTURIST.

Will some one please tell me how to kill lice on goats? Ours are very lousy.

As one of your correspondents has asked how to do it, here is my receipt for making sweet pickled currants: Let the currants stand six hours in weak salt water, then drain through a colandar. When well drained, put into a stone jar. To every pound of currants, take one pound of sugar and a pint of cider vinegar, with spices to suit the taste. Put the sugar and vinegar over the stove and let come to a boil, then pour it over the currants boiling hot. Boil the juice once a day for three days. Peaches can be put up in the same way.

MRS. L. W.

FLORA wants to know if any of our lady readers can tell her how to remove tea and coffee stains from table-cloths; and we supplement the query by asking if chloride of lime will not do it.

Santa Clara County is to have a beautiful atlas. A competent corps of artists, writers, statisticians, surveyors, etc., are making rapid progress with the work. Many of the most prominent buildings and most important places will be elegantly lithographed. The whole work will be one of much value and interest.

Boys and Girls.

Over in the Meadow.

BY MRS. OLIVE A. WADSWORH.

[A Kindergarten play for twelve little boys, from "Songs for Our Darlings." The recitations should be single; the sounds and motions, such as winking, etc., given by the whole, in concert.]

First Boy—
Over in the meadow, in the sand in the sun,
Lived an old mother toad and her little toady one.
"Wink!" said the mother; "I wick," said the one.
So she winked and she blinked, in the sand, in the sun.

Second Boy—
Over in the meadow, where the stream runs blue,
Lived an old mother fish and her little fishes two.
"Swim!" said the mother; "We swim," said the two;
So they swam and they leaped where the stream runs blue.

Third Boy—
Over in a meadow, in a hole in the tree,
Lived a mother bluebird and her little birdies three.
"Sing!" said the mother: "We sing," said the three;
So they sang and were glad in the hole in the tree.

Fourth Boy—
Over in the meadow, in the reeds on the shore,
Lived a mother muskrat and her little ratties four.
"Dive!" said the mother; "We dive," said the four;
So they dived and they burrowed in the reeds on the shore.

Fifth Boy—
Over in the meadow, in the sunq bee-hive,
Lived a mother honey-bee and her little honeys five.
"Buzz!" said the mo her; "We buzz," said the five;
So they buzzed and they hummed in the sung bee-hive.

Sixth Boy—
Over in the meadow, in a nest built of sticks,
Lived a black mother crow and her little crows six.
"Caw!" said the mother; "We caw," said the six;
So they cawed and they called in the nest built of sticks.

Seventh Boy—
Over in the meadow, where the grass is so even,
Lived a gay mother cricket and her little crickets seven.
"Chirp!" said the mother; "We chirp," said the seven;
So they chirped cheery notes in the grass soft and even.

Eighth Boy—
Over in the meadow, by the old mossy gate,
Lived a brown mother lizard and her little lizards eight.
"Bask!" said the mother; "We bask," said the eight;
So they basked in the sun by the old mossy gate.

Ninth Boy—
Over in the meadow, where the clear pools shine
Lived a green mother frog and her little froggies nine.
"Croak!" said the mother; "We croak," said the nine.
So they croaked and they splashed where the clear pools shine.

Tenth Boy—
Over in the meadow, in a sly little den,
Lived a gray mother spider and her little spiders ten.
"Spin!" said the mother; "We spin," said the ten;
So they spun lace webs in their sly little den.

Eleventh Boy—
Over in the meadow, in the soft summer even,
Lived a mother fire-fly and her little flies eleven.
"Shine!" said the mother; "We shine," said the eleven;
So they shone like stars in the soft summer even.

Twelfth Boy—
Over in the meadow, where the men dig and delve,
Lived a wise mother ant and her little antics twelve.
"Toil!" said the mother: "We toil," said the twelve;
So they toiled and were wise where the men dig and delve.

"OUR CORNER."

A HAPPY greeting, nephews and nieces! Here is something for us to puzzle our brains over, and I am not sure but it is a point well worth discussing. Amanda puts the question as follows:

SANTA CRUZ, March, 1876.

Dear Aunt Polly: Feeling interested in the plan which you suggest for mutual improvement, I venture to send, as an answer to your puzzle, the following, suggested by a friend at my elbow: It is what we often find in the form of a roll with fire at one end and a fool at the other. My friend, you see, is very outspoken, and a little prejudiced against anything which you, dear Aunt Polly, would hope the young cousins will have nothing to do with.

Jerry has been a good deal exercised of late about a matter which presses sorely upon his conscience, and I have resolved to lay it before you for advice and comment. The "Good Book" tells us decidedly, among the commandments, "Thou shalt not kill." It does not add what; therefore, should not the commandment be construed to kill not at all—neither bird nor beast? Food we have in abundance of a variety of sorts without taking life, still, to many of earth's inhabitants, animal food has become a necessity. Jerry has a passion for hunting. Game is shy and unapproachable. He has been tempted to shoot robins and larks, and has received numberless rebukes from the bird defenders. Jerry asks if life is not as dear to every living creature as to each little bird, and what difference whether one is born a robin or a jack rabbit; is it more of a crime to take the life of one than the other?

Sincerely, yours, AMANDA.

Aunt Polly will only say that if you will look a little farther into the "Good Book" you will find other commands which involve the taking of animal life, both for food and other purposes, and still others that provide for the punishment of those who take human life; so I think that settles the question as to *what* we are not to kill. However, killing any animals for sport is cruel and wrong.

Here is a new correspondent. How do you do, Willie. Glad to shake hands with you:

CENTERVILLE, March, 1876.

Aunt Polly: I am nearly twelve years old, but not too old to write to you. The answer to Jennie's puzzle is "Air." I have one which I think is still more difficult. Here it is:

I am composed of 16 letters.
My 7, 5, 2, 6, 8 is a large man.
My 8, 9, 15 is a weight.
My 8, 11, 10 is a metal.
My 12, 2, 8 is a small animal.
My 3, 2, 3, 4 is an article of ornament.
My 1, 14, 16 is what old people sometimes wear.
My 13 is a consonant.
My whole is the name of an American author.

Please put this in your journal.

WILLIE A.

Jennie brings another puzzle for you. I wonder if she will be as successful in solving Willie's enigma as he was in guessing hers. Do not allow yourself to be beaten by a boy, Jennie.

LIVERMORE, March, 1876.

Dear Aunt Polly: I have written once, and do not know that I ought to write again, but I thought I would send the answer to the enigma somebody sent you. It is the letter "O." I got thirteen separate words from the word "carpets." Here is a riddle that is not new, but perhaps some of the "cousins" have never seen it, and for me it was very hard:

There is a thing in many lands
Teaches multitudes but nothing understands.
It is not in Italy, but in Rome it doth appear;
It comes in every moment, but not in twenty year;
It's in all kinds of timber, but not in any tree;
It's in all kinds of mountains, but not in land or sea.

I remain, your niece, JENNIE D.

You did very well to get thirteen words from "carpets," but you are beat, for here comes another little niece, only ten years old, who has done still better:

LIVERMORE, March, 1876.

Dear Aunt Polly: My papa takes the AGRICULTURIST, and when it comes I always turn to the children's "corner." I like puzzles very much. I tried to see how many words I could make out of "carpets," and succeeded in getting one hundred and sixty-five, which I send you. [Will give the words another time.—Aunt Polly.] I think the answer to Jennie's rebus is "air." As this is my first letter to you, I will make it short.

Lovingly, your little niece,

MARY C.

Aunt Polly thinks there are still more words that can be found by using the letters as many times as you please. To the little girl or boy who will send us the most Aunt Polly will send the pair of chromos, "Chicks" and "Birds." Now all try real hard, won't you? And now hear what Georgie has to say:

SAN JOSE, March, 1867.

Dear Aunt Polly: Every night my mamma reads to me and my little brother after we go to bed, and it is a real nice way to do, because it makes us sleepy, and we dream of stories and things. I like the children's "corner" ever so much, and hope lots of girls and boys will write to you, and I wish the big ones would tell us something funny, too. Mamma read me what "M. E. T." said about telling us some funny stories, if they would let her, and I want you to be sure and ask her to, right away.

Your niece, GEORGIE.

LIVERMORE, March, 1876.

Aunt Polly: In looking over the children's "corner" of the AGRICULTURIST I found the enigma, and think I can solve it. It must be the letter "O." I have written an enigma, which I send you. If you think it worthy of a place in your columns I should be glad to see it published.

I am composed of 42 letters.
My 11, 2, 7, 26, 29, 41, 20, 35 is an animal of the hog kind.
My 18, 33, 10 is a weight.
My 15, 24, 32 is a domestic animal.
My 36, 38, 25, 39 is a the month.
My 26, 10, 8, 12, 30, 39 is peril.
My 1, 6, 13, 39, 2, 42 is an inclosure.
My 36, 19, 14, 31, 30 is the sap of a fruit.
My 22, 23, 28, 27 is quiet.
My 17, 4, 5, 32 is to raise.
My 31, 16, 21, 23 is to fit.
My 37, 9, 27 is a kind of fluid.
My whole is something that we always welcome.

Yours, TOMMY CLARK.

Now here is a little anecdote you will like:

A child went with her mother to buy shoes, and was shown some congress boots with a row of buttons up the side in imitation of buttoned-boots. She declined trying them on, and when mamma insisted, she declared they were only make-believe buttoned-shoes, and she did not want to wear anything that was a sham. "Please let me try a plain

pair, sir." The child was humored and the mother and shop-keeper both taught a lesson that it would be well for all to keep in mind—to avoid pretending to be different from what you are.

And now, good-bye all, and be sure and see that "Our Corner" is full next month. Every month we want some puzzle that will be worth a pair of chromos to beat.

GRANDMA'S TALKS.

Easy Lessons from Nature--No. 3.

Well, children, how many of you are ready to tell what will change ice to water, or to steam? Johnny says if he warms the ice it turns into water, then when the water gets hot enough it turns into steam. Now this is a fact worth knowing and remembering, that *heat* is the cause of *all the changes* of matter from the solid to the fluid condition.

After a shower do you see any of that kind of work done by the sun? It rained last night, and Johnny and Lucy a looking eagerly out of the window to see—what? That steam or vapor is rising from the roof of the barn. Look sharp, children, and you will see vapors rising from the ground, fences, houses and lake, as if hurrying up to make more clouds, which will fall to the earth again in rain.

Lucy asks what stops the steam up in the air—why it don't go clear up to the stars and never come down again. Johnny calls her a "goosie" to ask such a question. But can you answer her, master Johnny? Then you want to know the reason, too, don't you?

Breathe on the window glass, Lucy, and what is the result? Oh! you cannot see through the glass; you have made a tiny cloud there. You may laugh, but it is a real cloud. Now breathe ten or twelve times in the same place. You see the little cloud is beginning to rain. At first the drops were so very small they scarcely appeared to be water, but by adding more steam or breath they have increased in size until too heavy to stick to the glass and are falling like rain.

If heat causes water to change into steam, what happens when heat is taken out of the steam? Johnny says truly that it will turn into water again. What changes your breath (which is vapor or steam) into water on the window pane? That is right, Lucy. Feel if the glass is cold. You have found out the reason, now. And if we took a great deal more heat out of those drops, what then? They would turn to snow or ice. That is Jack Frost's work on the window panes in freezing weather. Perhaps you have never seen his beautiful work in this mild climate.

I must tell you now that even in countries where the weather is always excessive warm the tops of the highest mountains are covered with snow; also, that the people who travel in balloons always notice that the air grows colder as they rise higher and higher (for balloons frequently sail into and through the clouds).

Now, children, what stops any vapor or steam from rising and turns it back to the earth in rain? You are right, little Lucy. The cold air stops it, for that takes the heat out of the steam, which forms into clouds of tiny drops of water, falling in rain when they become heavy enough. And now Johnny will not call you a "goosie,' so readily again, I think.

Thus, you understand that the atoms composing water are not destroyed, but are continually taking one of the three forms we have mentioned: solid, liquid, or vapor. For instance, fresh falling rain is formrd of the water-atoms which have fallen over and over again; for since the creation of the earth not an atom has been destroyed of any kind of matter.

Lucy says Bridget has certainly destroyed her dolly's hat, for she threw it in the fire and it is gone entirely. Not so, Lucy; the form only is changed. You can't fit it on your dolly now, I know. It has certainly lost its fashionable shape and all its beauty as a hat; but every atom still exists, and perhaps takes more space than it did before, only your little eyes can't see it. In the bright flame it vanished from your sight, turning into smoke or gas, leaving only a few ashes visible.

Here I have a little toy called "Pharaoh's serpent's egg." It is no larger than a white bean. I light it carefully with a match. See it burn! Children, dont think it is really growing into a live snake, though it looks very much like one as. fold after fold, it wriggles out of the burning egg. That is only the ashes you see forming, and some portion of that little egg has also passed off in smoke.

I suppose you consider smoke "nothing," but you really have seen something, Johnny and Lucy, that increases in size by burning. The ashes are formed by a new combination of the atoms in the egg and the atoms in the air, caused by applying heat.

Our lesson to-day has been about a property, belonging alike to all matter, which philosophers call *indestructibility*. Lucy says it is too long a word for such a little girl to remember, but as it has only seven syllables, by taking two syllables a week I think you can learn it well during the month.

Correspondence.

A POLITICAL ENIGMA SOLVED.

BY UNCLE SAM.

Dear Editor: An article in a San Francisco paper accounting for the present hard times by the fact that our taxes exceed our exports, suggests to me a few thoughts that possibly you may find room for.

A heavy tax is not necessarily detrimental to the prosperity of the country. If the money raised by taxation is promptly and evenly distributed among the people, and in such a manner as to help the work of the country, it may be a great benefit.

I have a force of men working my ranch, and tax them ten dollars each for a "Hail Columbia" fund. It looks like a heavy tax; but if I pay each man a dollar every time he whistles or sings "Hail Columbia" the men soon have the money in their pockets, and the place is benefitted by the cheery influence and patriotic suggestions of that good, old tune. Should I insist upon a stave of "Dixie Land" being sung or whistled *before* each bar of "Hail Columbia," my men will probably discuss, quarrel, and raise more discords than there are in both tunes kept apart, and my "Hail Columbia" fund will come to grief.

It is better that Congress should refuse to vote a Centennial fund, than to force "Hail Columbia" and "Dixie" on the same platform.

Should I pay the "Hail Columbia" fund to a band of Chinese musicians, and thus send it nearly unbroken across the Pacific, my men would feel the discord of the transaction, and there would be less money to carry on business on the place.

Should I give it to any one man in such a shape that he could hire my men at increased wages to build some ornamental work that would return no equivalent to the country, both ranch and men would eventually suffer a loss, as during this absence my ranch has not prospered, and where the ranch or country goes down hill, the workmen follow.

Some of my men on the south side of the ranch got dissatisfied, jumped the ranch, stole the stock and tools, and elected another boss. I was obliged to detail a part of the workmen from the north side to stop these irregular proceedings, and so much labor being withdrawn from producing, I had to borrow money and issue notes.

This being so easily done, I pay my faithful men large wages, and they go into many enterprises on their own hook. They grade a railroad across the middle of the ranch, *and make me responsible for most of the work.* They spend vast sums of money, and withdraw much labor from production, on a railroad at the northwest corner of the ranch that, at present, is dead capital. They have erected a great many very costly buildings all over the ranch, most of them good to have, but will not pay this generation for building. Up the stream from one camp called New York City, they have built summer camps and laid out pleasure grounds that have cost millions of dollars, but return but very few dollars for the mass of the people to live on. Plenty of my promises-to-pay circulating among the men stimulated trade most unnaturally. Stimulated trade fairly intoxicated manufacture, and my ranch is piled up in places with boots, shoes, woolen and cotton goods, wagons, plows, etc., begging for a market, while those that made them are begging for employment, and those who need them have no money to buy them.

My dissatisfied workmen on the south side, I am glad to employ to build up the country they have so badly damaged. But if they insist on my *sliding along* to let their whipped boss draw his stool up to my desk, handle half the money, and make half or more of the laws, I must firmly say, No. I had rather he would keep out of sight or emigrate.

I would say to my men, north, south, east and west, be industrious and work at such work as will pay; don't fool away your time at fancy work for a few years, and we will pull through all right. I have been learning a good lesson watching my good friend Johnny Crapaud, who has a ranch over east of the big pond, and who so kindly lent me a helping hand nearly a hundred years ago, when I had a little difficulty with my mother. Johnny has had a rough lesson to recite, but his boys have taken hold with such good grit, and used so much economy, and paid their bills so promptly, that it is more than an even chance that they will, morally, be victors over their physical victors.

LETTER FROM CASTROVILLE, MONTEREY, COUNTY.

Deep-Plowing Controverted.

Ed. Agriculturist: I have noticed articles on deep and shallow plowing in late numbers of the Agriculturist. During an experience of nine years farming in California, I am convinced that thorough surface cultivation is the best. Good crops do not depend upon deep plowing in dry years, and in wet seasons they do as well upon shallow as upon deeply plowed land.

Where the soil is shallow, as upon poor hill land, it will not do to plow deep, as the only good soil is on top, where it belongs; to turn it under and bring up coarse material ruins it. Early seeding, as a rule, works best, and is better than all theories about deep plowing.

I have plowed my ground deeply after rains, when I could, and the light plowed, early sown has always yielded the best. The soil is lighter, finer and better for the germination of the seed when worked shallow and thoroughly.

In 1870-71 I plowed both deep and shallow, and I saw the wheat on the deep plowed soil dry out, while on the shallow worked it made a good crop. My neighbors have experienced the same. On the deep plowing the grain was slower in getting a start, and as the plowed soil dried out the roots perished, while on the lightly tilled they reached for moisture sooner and grew right along.

A gentleman in Pajaro valley plowed deep and sub-soiled with a small plow following the large one. In sandy sediment the plows ran very deep, and in other places a poor sub-soil was stirred up. He did not get as good grain from his deeply plowed land as from that which was lightly worked on the surface alone.

Potatoes and beans need deeper plowed soil than grain, but not too deep, either, but thoroughly working of the soil. I have tried it during the last nine years with potatoes, barley, wheat and oats. A good, early start is the best for all grain crops, and in all seasons, wet or dry, I find deep plowing not so good as thorough surface tillage, not over three or four inches.

It is not safe to plow adobe land over five or six inches, and it takes a good deal of extra power to do it. Your correspondent, "Mechanic," who speaks of plowing fourteen inches, must be in error. This rainy season it may do to plow some classes of soil deep, such as black adobe on clay sub-soil. Such soil is the best and most enduring grain land in the world.

The farmers in Europe do not get their best crops from real deep plowing, but from heavy manuring and working into the soil ingredients to make it light, rotation of crops, changing to green crops and pasture, etc., two plowings a year, careful harrowing, and fine tillage generally. As they have small farms, and naturally a shallow soil, it has paid them to deepen it artificially, underdrain it, and renew its fertility with manures, plowing under green crops, etc. They have a sod to turn under, rains every month in the year, and must farm differently.

Here, before the heavy fall rains, we cannot plow deep—and if we do, we get no better crops. But with shallow cultivation we can get in our crops early, and in better condition than at any other time. And if not drowned out, we get the best crops.

On rich land the only danger is that the grain will grow too rank and lodge.

Subscriber.

In the Common Lot of Man.

Whereas, In the inevitable course of human events, another link has been dropped from our fraternal chain in the death of our worthy and youthful brother, C. W. Keith, and our Grange shorne of the promise of support and greater usefulness in a more mature age; be it

Resolved, That in the death of our youthful brother this Grange has lost a worthy member and his parents a beloved son.

Resolved, That we extend our heart-felt and fraternal sympathy to the bereaved parents and friends.

Resolved, that this preamble and resolutions be spread upon the records, and a copy be sent to the California Agriculturist and Rural Press for publication.

Z. L. Garwood,
J. Knowles,
A. B. Hunter,
} Committee.

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GOOD BLACK INK.—A gentleman away out in Idaho says: "Good black ink is not easily attainable here, and the trash that passes for the genuine article is sold at fabulous prices." For his benefit and that of others similarly situated we repeat a recipe taken from the New York *Tribune:* To one quart of strong decoction of logwood, well strained, add three ounces of blue galls in coarse powder, twelve drams sulphate of iron, one and one quarter drams acetate of copper, twelve drams of well ground sugar, one and one-half ounces of gum arabic. Set it over the fire till it begins to boil, then set it away uncorked till it has turned black enough; add a few cloves to keep out the mold. It is a real pleasure to open a letter and find a clear, legible chirography, in ink of a decided color, as well as less of a task to write one with smoothly flowing ink.

STRAW AND HAY.—Good clean straw, carefully stacked, is supposed to represent a value in comparison with the best meadow hay, of three to one. That is, an animal must eat three pounds of straw to get the same subsistence as would be afforded by one pound of hay.

One of our exchanges mentions the fact that a person had trouble with the drawing out of staples from barn-doors, and screws from hinges. He drove pegs into the holes, and put the irons in again; but they would soon come out, wooden pegs and all. Then he used leather, which was better than wooden pegs, but in time the latter got used to the pressure, and let the staple out. Then he filled the holes tightly with cork, and put in the screws and irons, and they have remained in perfect condition to this day.

TO PRESERVE FENCE POSTS.—According to excellent authority, fence posts can be made as imperishable as iron for less than two cents apiece. Pulverized charcoal is to be stirred into boiled linseed oil to the consistency of paint, and a coat of this is to be brushed over the part of the post to be placed in the ground.—*Boston Journal of Chemistry.*

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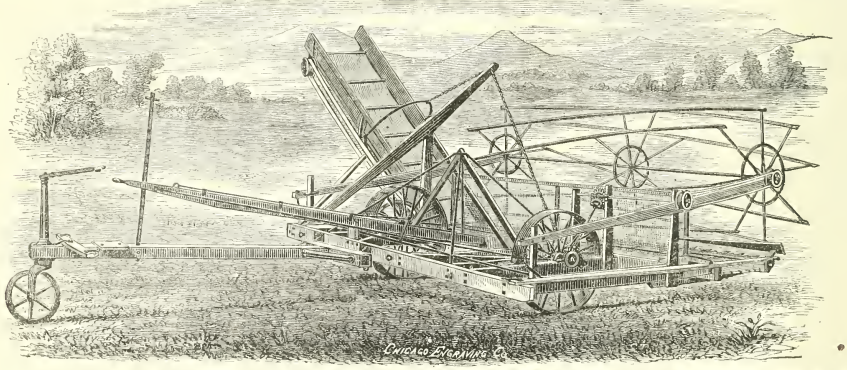

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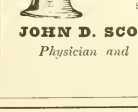

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VOL. 7 CALIFORNIA No 5

AGRICULTURIST AND LIVE STOCK JOURNAL

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A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

MAY.

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Brown Leghorns, Superior variety. Eggs $4 per doz. Trios, after August 1st, $15.

My Games are from stock imported by me from the most celebrated breeders in the United States and England.

Under no circumstances will an inferior bird be sold. Purchasers can rely in all cases upon receiving the best.

Orders received will be filled in rotation. Refer to the Editor of this paper.

FRED. E. COLLINS,
P. O. Box 171, San Jose. my

CALIFORNIA GLOVE FACTORY
SAN JOSE.

WILCOX & WILLIAMS,
Manufacturers and Dealers in
GLOVES AND GAUNTLETS
Of all Descriptions.

HARVEST GLOVES,
HEAVY BUCK GLOVES
For Teamsters and Farmers,
HEAVY AND LIGHT GAUNTLETS
For Ladies and Gentlemen.
HEAVY AND LIGHT BUCKSKINS
For Gentlemen, and
FINE KIDS
For Ladies.

☞ The very best materials are used in our Factory, and skilled workmanship is guaranteed.

STORE AND FACTORY:
Santa Clara street, opp. Auzerais House. my

F. W. WOLLF,
The only agent in San Jose for the
LIGHT RUNNING
DOMESTIC
NEW WILSON,
REMINGTON,
AND VICTOR
SEWING MACHINES.

A full assortment of SILK, THREAD, OIL, ATTACHMENTS, the Best Needles for all Sewing Machines constantly on hand.

319 Second Street,
Opp. Fountain street, San Jose. my

HORSE-POWERS! HORSE-POWERS!

SALE BY THE SHERIFF.

THERE will be sold by the Sheriff, on
SATURDAY, MAY 13th, 1876,
(If not previously disposed of privately) at the
SAN JOSE FOUNDRY,
FIVE of PELTON'S Celebrated
Six-Fold-Geared Horse-Powers,
Suitable for Threshing, etc.

Call and see one in operation in the Foundry Yard, or send for circulars if you want further particulars.

☞ The Superiority of these Powers is too well known to call for comment.

DuBois'
MOWER ATTACHMENT.

This is an attachment which enables the farmer, in all kinds of mowing, to cut his grass without any aid whatever behind the mower. A sweeping, curved arm guides the grass or grain in front of the cutter-bar in such a manner that when mowed the swath has the appearance of being cut with a grain cradle, the heads all lying away from the standing grass or grain about 12 inches in the clear. To facilitate the operation, an ingenious attachment is made fast to the end of the cutter-bar, in place of the shoe usually used with mowers. In lodged grass or grain, and when the wind blows contrary to the lay of the swath, these Attachments work like a charm, having the cut swath lying just as desired. The Attachment can be fitted to any mower.

Mr. DuBois has now made arrangements to fill all orders. The cost of the Attachment will range from $12 to $15—the price varying with the expense of fitting to different mowers.

Address:
ORIN DuBOIS, San Jose.
Or call at the shop of Scott & Watkins, on the Alameda, San Jose.

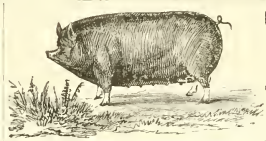
The Editor of this paper has witnessed the action of this Attachment in the field, and can cheerfully endorse the above statement as being substantially correct. It is certainly a valuable aid in all kinds of difficult mowing. my

J. M. MOOREHEAD

Is now receiving the finest and most elegant line of
MILLINERY, FANCY GOODS,
—AND—
LADIES' FURNISHING GOODS
Ever offered in this City
All of Our Own Direct Importations,
AT 270 SANTA CLARA STREET,
Opposite the Auzerais House, ... San Jose.

Ladies' Hats and Bonnets
BLEECHED, PRESSED, and DONE OVER
In all the New Shapes.

STAMPING DONE TO ORDER
In the Best Manner.



Ho! For the Coming Harvest!!

Where to get the BEST
MOWERS & REAPERS
Is now the important question.

Examine those introduced by the
FARMERS' UNION.
THE LATEST IMPROVED
Two-Wheeled McCormick
AHEAD OF ANYTHING.

The cutter-bar of the Mower has the action of the Champion and the Buckeye, with Elasticity, Strength and Easy Control superior to all others. It is Powerful, Durable, Reliable; costs LESS than other first-class machines, lasts longer, and needs no repairing for years.

THE IMPROVED ADVANCE
COMBINED
Self-Raking Reaper and Mower
Has SEPARATE BARS for reaping and mowing —a truly Combined machine.

THE FAMERS' UNION
Has the agency for these machines in Santa Clara, San Benito, Santa Cruz, and Monterey Counties. Depots of Sale will be established in the towns of Gilroy, Hollister, Salinas, Watsonville, and Santa Cruz. Farmers will find it economy to see and examine these machines before buying others.

NEW YORK
REAPERS AND MOWERS
FOR SALE BY
THE FARMERS' UNION,
SAN JOSE,
PRICE, NINETY DOLLARS.
ap

Closing Out Stock

THE SUBSCRIBERS, INTENDING TO CLOSE up their business with as little delay as possible, now offer their stock of

Jackson Wagons!

As a WHOLE, or at RETAIL, on the most favorable terms and at very low prices,

J. D. ARTHUR & SON,
mh Cor. California and Davis st., S.F.

PRINTING. Posters, Dodgers, Handbills, Books, Catalogues, Circulars, Programmes, Bills of Fare, Invitations, Receipts, Labels, Blanks, Billheads, Statements, Cards, Tags, etc., together with every description of Job Printing executed promptly and in a workmanlike manner by COTTLE & WRIGHT, No. 314 Market st, over Bland & Regnart's auction store, San Jose.

C. S. Crydenwise,
CARRIAGE MAKER. PIONEER Carriage Shop.
314 SECOND STREET,
Between Santa Clara street and Fountain Alley, San Jose.
Agent for Fish Bro.'s Wagons.

R. S. THOMPSON,
NAPA, CAL.,
Importer and Breeder of
THOROUGHBRED
BERKSHIRE SWINE.

FOR THE HARVEST OF 1876.

FARMING MACHINERY

At Cost of Importation.

BERRY & PLACE, San Francisco,
Agents for J. I. CASE,

ARE PREPARED FOR THE COMING HARvest with the largest stock of Improved Machines and Implements, ever offered to the farmers of California. These machines are all new, mostly built this season, and now just being received from the factory. The list embraces such machines as—

ETNA MOWERS.

Price $100. Extras for which we guarantee to keep always on hand. Weight, 650 lbs.; cuts 4 feet 4 inches. Has Double Speed to knife, and is the best machine ever sold in California.

ETNA AND KIRBY REAPERS,

At from $150 to $200. We have a large stock on hand, and are determined to sell them, regardless of cost.

Patent
TREADWELL'S Single-gear HEADERS,

Made by J. I. Case & Co. The best ever sold in California. Ask any man who has tried one, "What he thinks of it."

HOADLEY ENGINES.

The new style Hoadley Straw Burner is the finest threshing engine in the world. Price, $1700. The standard 15-horse power Hoadley, $1650; 12-horse power, $1450; 9-horse power, $1200 All with heavy running gear, and all improvements.

THE END-SHAKE THRESHER.

These Threshers are the finest in the world. Send for REDUCED PRICES.

THE WRITEWATER WAGON.

This is the STANDARD WAGON on the Pacific Coast. Send for reduced prices.

☞ We have a few Pacific Wagons on hand, which we offer below cost. Send for prices.

☞ Any farmer buying $300 worth of machines or implements of us, will be paid his fare to San Francisco and back, if not over 200 miles. He can thus come and see for himself without any expense.

BERRY & PLACE,
Old Stand,
Market, head of Front st. San Francisco.

Menefee & Gaston

DENTISTS,

S. W. Cor. Santa Clara and First Sts

Over Farmers' National Gold Bank,

SAN JOSE.

☞ Special attention given to Fine Gold Fillings. Laughing Gas Administered.

LEATHER.

R. C. KIRBY & CO.,
TANNERS!

SANTA CRUZ OAK-TANNED SOLE LEATHER,
WHOLESALE DEALERS.

Office—102 and 104 Battery Street, SAN FRANCISCO.

The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 7--No. 5. | SAN JOSE, CAL., MAY, 1876. | Subscription Price, $1.50 a Year. Single Copies, 15 Cents.

ENRIGHT'S PATENT PORTABLE WOOD AND STRAW BURNER.

Mr. Enright, of San Jose, the inventor of the thresher engine of which we present an illustration on this page, has studied the wants of California farmers for many years, and has now succeeded in producing an engine that at once commends itself for practical use. The arrangement for burning straw is far superior to that of other engines, preventing any choking up of flues and at the same time, by admiting a larger supply of air, forming complete combustion. The economy of thus utilizing the straw that many farmers burn simply to get rid of it is apparent. For practical use, we believe this engine to be a worthy and successful invention. Following is a card from Mr. Enright in which he sets forth his claims:

Fifteen years ago I constructed the first portable thresher engine on the Pacific coast, and its introduction in the harvest field was an important event in the history of grain raising in California. From that event up to this time, I have been constrantly experimenting and improving on my original ideas of steam threshing in the open field, until I have now constructed an engine and boiler so near perfection that is is barely possible to be improved upon.

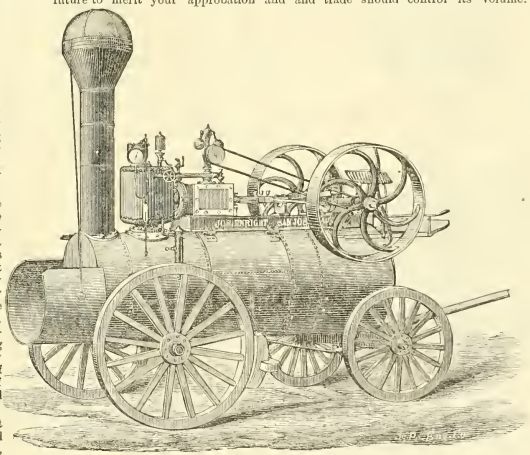
Having for so many years made it a specialty to construct portable thresher engines, I can with confidence recommend my patent wood and straw burning engines manuiactured by me at the present time. They burn wood or straw without change, and coal by changing two plates; they have also the advantage of compactness, superior workmanship, great durability and economy in saving fuel, using but two tons of straw to equal one and a half cords of wood, and saving 40 per cent. of fuel usually consumed by wood burners.

It is a well-known fact that straw has been successfully used as a fuel to raise steam, in Europe, for many years, and it has been lately introduced on this coast, but with little success until I invented for that purpose my "patent ring grate and combustion chamber," which prevents any choking up of flues, and by which I am enabled to admit a larger supply of air, thereby forming complete combustion and doing away with all delays on the field.

I built and sold thirteen of them last season, all of which gave entire satisfaction, which is proved by the many testimonials received from those using them.

I am now busy constructing twenty more for this season and intend to have them all ready for use this present harvest; I also intend to make it to the interest of all farmers to purchase of me, who need a cheap and economical power for threshing. I come before you with this power, with full assurance of your patronage, having considered your needs in this very essential invention. I have had an offer from parties in San Francisco and Sacramento to have my engine built in the East on royalty, which offer I declined, although it may have been to my advantage to do so; I preferred to be sustained by the people of California in home manufacture, and I come before you with an engine that is guaranteed to you in every respect, and which took the premium at the California State fair of 1875, as the best straw burner. And I further state that I hold myself in readiness to reinforce any of my customers; all that is necessary for them to do, is to send me a telegram and I will be at their service.

Thankful for past patronage, and by strict attention to business, I hope in the future to merit your approbation and continued patronage.



ENRIGHT'S PATENT WOOD AND STRAW BURNING ENGINE.

Further information can be had concerning these engines by addressing Mr Joseph Enright, San Jose, Santa Clara county, California.

The Virginia *Chronicle* says: Virginia City has given birth to a genuine sensation—a mule colt. It has been thought that the limits of cross-breeding had been reached with the mule production, and only two instances have been recorded of the further reproduction of the mule genus. Virginia now furnishes a third. The colt resembles a mule in every respect, but is much smaller and more delicate. It is the property of J. S. Hardwick, who has been offered $300 for it by J. Douglas, which he refused.

FINANCIAL FOUNDATION.

The annual interest on the foreign indebtedness of France is said to be more than the entire product of all the gold mines of the world! Then how contemptible does the idea seem that gold is the *true basis of all values*. There is nothing of much value produced without human industry. And inasmuch as industry supplies about all the wealth of the world, *why not base values upon industry?* There can be no gauge more accurate, or nearer in accordance with reliable, simple, and natural principles. Industry must be the support of a perfect financial system, and such a system must be predicated upon industrial values. Therefore, industry should establish the relative values of denominational currency, and the demands of industry and trade should control its volume. Money or currency should be the servant, not the master of man. It is not at all necessary that money should contain intrinsic value in itself. Its only use is to represent values and be exchangable for value. If properly grounded in and upon the actual productive industry and substantial honor of a people or nation issuing the same, it may be unexceptionally exchangable for any and all valuable commodities without discount. Interests may be brought so low as to unburden our people from that source of taxation. The Government may regulate interest rates by *loaning*, instead of *hiring* money. An industrial people never can, and never should be satisfied with a vacilating money, whether paper, silver or gold. Something reliable, cheap and abundant is demanded by the people. And the people are ready to pledge their property and their lives to substantiate a currency that shall serve them with the least expense and most utility.

BENTLEY'S FURNACE AND DRYER.

Last month we briefly mentioned Dr. Bentley's furnace and fruit-dryer. We expected to have a cut to illustrate a description, but it is not ready. The furnace is simply a plain, barrel-shaped fire box surrounding a smaller barrel which is supplied with air by tubes connecting with the air ont-side of the furnace, and with a discharge upon the top for its escape. Another cylinder surrounds the whole to take up all the heat radiated outward, and together with the hot air from the interior barrel conduct it by a tube, or directly, into the dryer. The smoke from the fuel, after being deprived of its occompanying heat, is carried off through a separate pipe. The construction of the furnace is such as to most economically utilize the heat of the fuel, as there is a very large radiating surface to absorb it before the smoke can escape.

The dryer is shaped like a long box, and is placed horizontally upon legs about three feet from the ground. Inside are several sets of rollers above each other, at each end, with endless bands, running longitwise, upon which screens with the prepared fruit for drying are placed. The fruit screens are put in at one end and taken out at the other, or at the same end, and a crank is used to run the screens in the direction desired.

The heated air is to be applied at the top of the dryer, and is either forced or drawn downward, reversing the methods heretofore used by other dryers. In this arrangement, we think, Dr. Bentley has struck upon the right principle. The heat can be entirely utilized in this way. After the hot air is used for drying, it can be further used for feeding the furnace fires, or may be conducted again into the heater, or be expelled, as susts the purposes of the person in charge.

Altogether, for simplicity, economy, and philosophical principles of construction, this dryer strikes us as being nearer the thing than any ever gotten up, whether on a large or small scale. No engine or blower is necessary with this dryer, as the air drawn into the heater will be expelled with sufficient force to operate as desired without other power. It is a perfect thing in itself, and within the reach of all. Dr. Bentley will manufacture three sizes of these furnaces and dryers, and can make them of any capacity desired. The cheapest furnace (small size) is $50; dryer to go with it, capable of drying ten to fifteen bushels of fruit per day easy, $25 more, making only $75 for a complete outfit for a small orchard. No large commissions are counted against the purchaser in these figures.

Chip hats ought to suit blockheads.

California AGRICULTURIST AND Live Stock Journal.

$1.50 Per Annum.

PUBLISHED MONTHLY BY THE

CAL. AGRICULTURIST PUB. CO.

S. HARRIS HERRING, Editor.

OFFICE:—Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

SPECIAL TERMS TO AGENTS.

RATES OF ADVERTISING:

Per one Column	$12 00 Per Month
" half Column.....	6 00 " "
" fourth Column.....	3 00 " "
" eighth Column.....	2 00 " "
" sixteenth Column.....	1 00 " "

☞ We are determined to adhere to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

An excellent variety of contributions may be found in this month's issue. It takes all hands to make a good paper, and we never feel prouder than when we can send out a number filled with good articles from the pens of our worthy correspondents.

What can be done with the mining debris that is now filling the beds of rivers and causing the water to submerge farms and ruin them with a deposit of mud, is a question that the agricultural editor of the "Record Union" undertakes to solve. He would build dams in many places in the lower mountain ravines, and let the sediment make acres of level ground for cultivation. Also, by conducting it upon the low tule lands, would convert them into the richest alluvial farms. We judge these suggestions to be sound and practical.

Illustrated Temperance Lectures. Mrs. Carrie F. Young has been lecturing in San Jose and vicinity during the past month with excellent success. Although the subjects of temperance and health are old, and by many thought to be worn threadbare, Mrs. Young seems to be in such demand that every one who hears her once wants to again, and wants his friends to hear. Every school district has sent a call, and if Mrs. Young is not worn out before she gets away, maybe some outside of Santa Clara county will have the privilege of listening to her earnest and instructive talks to the people, for their good. Long may her voice be heard in the land!

Vineyards, upon rich, moist soils, will be likely to make an immense growth of wood this season and produce inferior fruit. Too much moisture in the soil is not favorable to the production of fine grapes. We advise letting the grass and weeds grow a while to absorb moisture from the ground. The grapes will be all the better for it. Better than this would be the raising of a crop of some kind of vegetables in the vineyard. To guard against mildew, which is bound to be prevalent this moist season, use sulphur freely. Put it on the blossoms and on the fruit as soon as fairly set, and even when half grown. A free use of sulphur in many localities will be absolutely necessary to insure good grapes.

The *Country Gentleman* publishes, in its editorial notes, the following:

A CALIFORNIA TRANSACTION.—Of course we should not publish the following statement if the name of the writer were not known to us: "Eds. 'Country Gentleman'—Some time during 1874, you published several letters from a correspondent in California who had a good deal to say about alfalfa. He stated in one of his letters that pure seed could be obtained from a Col. Warren, 320 Clay street, San Francisco. In January, 1875, I wrote a letter of inquiry to the Colonel, asking the best way of shipment for 50 pounds alfalfa seed. I received a reply signed Warren & Co., stating that for $12 in gold they would send me by mail, postage paid, 12 bags of four pounds each. I immediately mailed them a money order for the amount, and have not heard from Warren & Co. since. I wrote two letters, but got no reply, but they did not see fit to reply. I received a statement from the postmaster of San Francisco, that the order was presented by the firm mentioned, and paid.

"If Messrs. Warren & Co., will only return the amount of that money order, I won't write them another word about alfalfa, but invest it at once in red clover.—[P., Cleveland, Ohio."

And from another correspondent the following:

"To COME DOWN A PEG.—I have an account of another 'California transaction' to give you. Acting on the information concerning alfalfa referred to by your Cleveland (Ohio) correspondent, on page 103, January 12, 1875, I forwarded to Col. Warren, editor of the 'California Farmer,' a postoffice money order for $6, begging him to send me alfalfa seed by mail, according to the terms named by Mr. Armstrong, but in case the price had advanced, then to send the money's worth. Hearing nothing from Mr. Warren, February 21st I wrote him again. No answer being received, I wrote to make inquiries of Mr. Armstong. He replied promptly, informing me he had visited the 'Farmer' office in San Francisco; that they acknowledged the receipt of the money, asserted seed had been sent, but that by mistake a wrong address must have been made. However, they promised to send another package, and to compensate for the delay and error to add a valuable collection of Pacific Coast seeds. Meantime, I had ascertained from the San Francisco postmaster that the order had been paid on a date given, and from the postmaster of Champaign, Ill., that there was no other postoffice of that name in the territory of United States. But I have heard nothing of Col. Warren to this day. Before making this transaction public, I have waited for corroborative evidence, and in concluding my testimony beg to ask if such acts are not doubly infamous from the fact that they must inevitably annoy and embarrass an upright and honorable man?"

Several complaints of a like character, from persons in this State, have been made to us, by well known and responsible persons, and if California and the publishers of papers devoted to the high calling of the farmer, have got to rest under an obloquy from the villainous transactions of any one man or firm, it is about time to ventilate the matter. We should have published a few facts long ago, as an honest warning to the people, but for the advice of friends, who told us that our motives would be impugned, and we had better not dirty our fingers with the subject.

The elegant plant stand and bell-glass fernery which we illustrate this month is certainly a pretty ornament for a sitting-room, and the window bracket for a pot and hanging-basket is also. These can be found at Mr. Mitchell's flower store, San Jose.

Our readers will find Dr. Scott's article in this number very worthy of contemplative reading. "Old Mortality" went about with pious hammer and patient chisel and renewed on the tombs of the old Scotish Covenanters the names and dates that the ruthless tooth of Time had well nigh erased. It was a labor of love. He desired to renew the names and virtues of those old worthies to the living age. Would that some reforming "Mortality" would rise up now in our midst, and retouching the tablets of our hearts, once more deepen and bring out in bold relief the almost forgotten principles and precepts of the Fathers of the Republic. Dr. Scott's article arouses refreshing thoughts.

Rust is likely to attack wheat fields in our coast counties in seasons when there is much moisture, producing a rank, tender growth of straw. Morning fogs, which wet the growing grain and then clear up suddenly, exposing the still wet fields to a hot sun, also showers and sunshine immediately following, are favorable to the germination and growth of the fungus rust. As a preventive, a bushel of salt to the acre, sown upon the growing grain, is good. Two horsemen, one each side of a field, with a rope stretched between them, can sweep a field of dew and prevent the scalding from the hot sun which seems to produce the rust. As a general thing, when the rust once shows itself in a field, it is safe to cut the wheat for hay before it is entirely ruined.

Upon the Chinese Question, the people generally seem, at last, to have come to their senses. Since this journal took the field, we have steadily opposed Chinese immigration, believing it to be a curse nearly exactly parallel in its effects to the slavery that once existed in the South, and which we opposed in the field, under arms. At one time—before we were aware of the evils that were fostered by Chinese servitude—like many others, we only thought of the generous principle of our Government which invites all peoples from all nations to come and join us in our free institutions, and be free with us, and become a part of us. But when we found that Chinamen would never do this, that they were antagonistic to our principles; bringing their slavery here, and coming only to get and carry away our wealth; when we found that their cheap labor benefitted none but their masters and rich men and monopolists; was building class distinctions, degrading labor, and bolstering up aristocracy; that no man or woman can compete with them and live as respectable beings in a civilized country should live; that their very contact was contagion and degradation, without one hope of bettering affairs while they control any species of labor prices; that their labor system discourages individual enterprises, and that, instead of making the country any richer or better, or becoming freer themselves under our flag, they absorb our wealth, make the poor poorer, discourage the immigration of other nations and people as African slavery did, and are, in every sense, in opposition to general thrift and prosperity, peace and liberty and good will, we turned, as we now are, in favor of the best interests of our own race and civilization.

Jottings.

The way to help along an agricultural paper is to talk for it and write for it. Talk to your neighbors and friends; talk to farmers, fruit growers and stock breeders and others, and tell them of the value of a good agricultural paper. That is one way to help its circulation. But there is also another way, and an excellent way, and that is to write for it. As you are at work, or walking from field to field, thoughts will flash into your mind, that, if put into an agricultural paper, would be of great help to it. Retain those thoughts, and when you have a little leisure, jot them down with pen or pencil on paper, and send them to be published. Send them on postal cards, or in the form of a letter, or in any other way. Editors are always glad to get these jottings, They give variety to the matter and interest to the paper. Every reader could contribute something of benefit to somebody.—*Rural World.*

A DURABLE WHITEWASH.—A whitewash that will stand the exposure to weather to which it is subject on the lighthouse structures of the Atlantic coast will certainly prove good for use in covering fences and farm out-buildings in our climate, and those who have noticed the appearance of the lighthouse structures to which the Bureau recipe wash has been applied, consider it but little inferior to paint. The following is the direction furnished by the Department for preparing and applying this wash, which can of course be tinted to suit any taste by the use of ochre, umber, Spanish brown or other ingredients: Slake a half bushel of unslaked lime with boiling water, keeping it covered during the process. Strain it, and add a peck of salt dissolved in warm water, three pounds of ground rice put in boiling water and boiled to a thin paste; half a pound of Spanish whiting and a pound of clear glue dissolved in warm water; mix these well together and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and when used put it on as hot as possible, using either a painter's or a white-wash brush.

There is probably no article manufactured in the United States that has extorted so much money from the working people in exorbitant price as the sewing machine. For over twenty years there has been a powerful combination which monopolized and controlled the prices of all first-class machines. Nearly all patents on sewing machines have expired. Yet the old prices are firmly adhered to by the monopolizers who are not satisfied with the millions upon millions of dollars extorted from the poor people who are compelled to purchase a sewing machine to gain a livelihood. Particularly is this true in large cities, where the working girls are compelled to toil from morning to night to save and pay eighty dollars for a sewing machine, that should not in any event have cost more than forty and with a good manufacturing profit at that.

If used to be a gin mill, then a barroom, then bar, then saloon, then sample room, then exchange, then parlors; now it is a picture gallery. "Go around to the picture gallery, and take a drink of the best whisky in the world," says an advertisement. Very good. We expect to see a groggery call itself a minister, or a public library, or a home for the friendless, or an academy of sciences, before we die.

Read the advertisements and profit by them

Poetry.

Jasper Dean's Musings.

THE apples were red in the orchard, the meadows were sober and bare,
The woods were ablame with a splendor that glowed in the glorified air.

Through the valley a tremulous murmur ran drowsily all the day long,
Where a brook kissed the pebbles, and passed them and sang its perpetual song.

Leaning over the gate of his garden, the leaves all awhirl at his feet,
Jasper Dean mused, like one who was dreaming a dream far more bitter than sweet.

"I am fifty years old this October," he muttered, "and how do I stand?
Well, I own a smart house and two hundred good acres of tol'rable land.

"There's many a man would be happy with half what I've got to my name,
But I'm not; and I reckon most likely there's suthin' or other to blame.

"There's a feelin' that sometimes comes on me, and mostly at this time of year—
When the birds fly away, and the dimness gives notice that winter is near.

"There's a feelin' that sometimes comes on me and makes me half wish to be dead;
And I don't know exactly what brings to buzz like a bee in my head.

"It may be the changing o' the seasons, with death and decay all around;
Or it may be a wish growin' stronger for suthin' that ain't to be found.

"There is hardly a day but the neighbors are talking about my affairs;
I don' thank them for standin' my business; I'm sure I don't meddle with theirs.

"But they talk, and they talk, and the drift of it all about my dull life.
It is dull, I know that very well; but I'm now past the time for a wife.

"When a man touches fifty, like me, he had better be sayin' his prayers;
Not fretting himself about women and runnin' his head into snares.

"There was Absalom Brown, that went off and got married at most fifty-five.
If he hadn't done that, I don't doubt but the critter would still be alive.

"But the woman he took just worried his wits out in less than a year;
Though when he went off she was ready with many a crocodile tear.

"But all women are not o' that sort. There are plenty as good as can be;
And if I had married at thirty it might have been better for me.

"There's the house, and a good one it is—not a better the country can show;
But I never go in without feeling a dullness, instead of a glow.

"A home may seem ever so pleasant and ever so neat and fine,
And still have no comfort within it; and that's what's the matter with mine.

"There is never a voice to give welcome, and never a glad smile to greet,
And my heart never throbs to the musical patter of innocent feet.

"What's the use of a man always strivin'? He gains but a little at last;
And it generally comes, if at all, when the time to enjoy it is past.

"Now, if I had married at thirty, as I had a notion to do,
Who can tell but my heart would be lighter, the home a more pleasant one too?

"But somehow I waited and waited; and now I am fifty years old;
There is plenty of frost in my hair, and my blood has grown sluggish and cold.

"I feel more like restin' than workin', and every year that goes by
Fears to tell me I'd better be careful, and leaves me a trifle less spry.

"And suthin' comes on me in autumn—I don't know exackly what way—
That makes me feel sad-like and solemn, and sets all my ideas astray.

"It may be the change o' the seasons, with death and decay all around;
Or it may be a wishin' and longin' for suthin' that ain't to be found.

"A man without some one to care for is not as a man ought to be;
And a home without some one to cheer it ain't pleasant to have or to see.

"Now, if I had married at thirty—Phaw!" here I am drivellin' on,
Within lots o' things to be seen to, and the sun, as I live, a'most gone.

"There's a chill in the air about sundown, I reckon I'd better get round,
Or I'll have that old rheumatiz shootin' all thro' me again, I'll be bound."

An Horatian Lyric.

O, blest is he, from business free,
Like the merry men of old,
Who tills the land with his own stout hand,
And knows not the lust of gold.

No sailor he on the stormcy sea,
No soldier, trumpet stirred;
And he shuns the town and the haughty frown
Of the courtiers' fawning herd.

But he bids the vine with her tendrils twine,
Around the poplar tall;
And he adds a graft, with a gardner's craft,
To the tree that climbs his wall.

Or a grazier keen, on the pastures green,
He sees his oxen feed;
Or he shears his flock, or he brews a stock
Of his rustic nectar mead.

And when autumn at length, in his manly strength,
Has raised his fruit-crowned head,
And plucked the pear, with its flavor rare,
And the grape with its clusters red,

With his knee on the sod he blesses God
For his mercies and favors free;
And he lays him along, while he lists the song
Of the thrush in the old oak tree:

While the waters glide with the rippling tide,
And the zephers softly creep
O'er the quivering leaves, mids the murmuring trees,
And lull the senses to sleep.

But when thundering Jove from his stores above
Sends wintry storm and rain,
And rock and wood, and field and flood,
Lay bound in his icy chain,

With many a hound, in the woods around,
He hunts the grizzly boar;
And ere daylight fade his gleaming blade
Is red with the monster's gore.

When the sun has act he spreads his net,
And the partridge, fluttering, dies;
He takes the hare in his crafty snare,
And the crane—a goodly prize.

'Mid joys like these, what ill can tease—
Who could remember pain?
He feels no wrong, and laughs at the throng
Of the cares that swell love's train.

If a loving wife—best staff of life—
Be his, and children dear,
The fire borne bright, with ruddy light,
His homeward step to cheer.

At the cottage door, when his toil is o'er,
She stands with her smile so sweet;
And holds up her face, with a modest grace,
His welcome kiss to meet.

And children glad swarm round their dad,
But hungry the man must be;
So she spreads the cloth, and he sups his broth,
While she pours out refreshing tea.

—[Blackwood's Magazine.

Follow Up the Plow.

BY WILL S. HAYS.

Hard times are now upon us,
And the people are in debt;
The country's full of trouble
And the worst is coming yet,
'Tis not without its causes,
And we'll gladly tell you now,
The only way to stop it,
Is to "follow up the plow."

Fill up your fields and prairies
With a crop that's "good as gold,"
And mine your hills and valleys wide
For iron, salt and coal.
The earth is the producer,
And we can tell you how
To make a princely fortune—
'Tis to "follow up the plow."

There are too many people
Who from their duty shirk,
Who'd rather make a fortune
By some other means than work.
The man who plants tobacco,
Corn, wheat or cotton now,
Is king among the moneyed men,"
He "follows up the plow."

The Days of Long Ago.

I wonder are the fields as green, the skies as brightly bine,
The birds as joyous in their songs, the flowers as bright in hue—
Wild roses blushing fresh and fair in many a green hedge row—
As sweet as those I gathered in the days of long ago.

"Oh yes," replies the maiden fair, with voice of melody,
With sunbeams in her waving hair, and eyes like summer sea,
"Yes, yes," responds the gallant youth, scarce pausing to reply,
While high resolve and happy love beamed in eager eye.

Oh speed ye toward the mountain tops we wise old graybeards say,
Yet are ye not so light of foot as we were in our day.
So hardy on the rocky paths, so blithe among the bowers,
So stout of heart as we were when your happy sire was ours.

Oh, speed ye toward the mountain top ye maidens fair and sweet,
While spring flowers deck your bowing hair and

dewdrops bathe your feet—
With star bright eye, with rose bright cheeks, yet are ye not, you know,
So lovely as the girls we loved a long time ago.

We linger in the lighted halls, for still we fondly prize
The echoing laughter of young lips the sunshine of young eyes,
Yet here we shake our wise old head and say with faltering tongue,
Old friend, things were not so, when you and I were young.

The dance may sweep its giddy round, the song its silvery flow,
What are they to the dance and song we joined in long ago?
Thus looking from the hills of age along youth's distant glades,
We mark the lingering sunlight there, but will not see the shades.

But oh! we miss the lightsome form, we miss the flowing curls,
We miss the buoyant hearts we own'd when we were boys and girls;
We linger fondly on thy joy, forgetful of thy woe,
O! happy age! O! golden clime! delusive long ago.

City Gardening.

The Sun and the Rose.

BY ALICE GRAY.

The sun, who smiles wherever he goes
Till the flowers all smile again,
Fell in love one day with a bashful rose
That had been a bud till then.

So he pushed back the folds of the soft, green hood,
That covered her modest grace,
And kissed her as only a lover could,
Till the crimson burned in her face.

But woe for the day when his golden hair
Tangled her heart in a net,
And woe for the night of dark despair,
When her cheek with tears was wet.

For she loved him as only a maiden could,
And he left her crushed and weak,
Striving in vain with her faded hood
To cover her guilty cheek.

The Flower Garden.

BY MARY HOWITT.

God might have bid the earth bring forth
Enough for great and small,
The oak tree and the cedar tree,
Without a flower at all.

He might have made enough, enough
For every want of ours—
For luxury, medicine, and toil,
And yet have made no flowers.

Our outward life required them not—
Then where fore have they birth?
To minister delight to man;
To beautify the earth;

To comfort man; to whisper hope
Whene'er his faith is dim;
For whoso careth for the flowers,
Will much more care for him.

SEASONABLE ADVICE.

WHOEVER expects to be successful in cultivating flowers and lawns, in our dry climate, must make provision for plentifully irrigating them. Many persons in town have hose that may be attached to the water pipes and irrigate everything either by showering or flowing over the roots. When so provided, a little care only is needed to keep everything in splendid condition.—Neglect is fatal to tender plants, and unless plenty of water is given, any plant will soon show suffering by a wilted look and the lower leaves turning yellow. With sufficient water and soil and shelter from winds, plants will grow most luxuriantly and will reward the care given them in living beauty and sweetness. Where water cannot be conducted upon plants or the surface soil cannot be wet without great trouble, and one wishes a few choice plants only, it is well to sink some tin or other vessel like a can, or flower pot with the bottom plugged, below the plant so as to hold water enough to last the plant a day or two at a time. The vessel should be first filled with pebble stones, old bones, or lumps of charcoal, and set be set about four inches below the surface, with some coarse material like straw or sacking placed over it before the soil is, to keep it from filling with fine soil. Then a hole should be left through which the water can be poured, covering it with a small stone or convenient thing. In this way plants can be kept growing with the least waste of water about the house in very dry and hot places. Still another way, and a very good one, too, is to dig trenches eight inches deep and a foot

wide all about wherever you want plants to grow, and either lay down troughs or fill with coarse gravel. At one end of this winding set of trenches, which should be all connected and as nearly level on the bottom as possible, have an upright box made to pour or pump water into, so that it may run all through the trenches. Plants set over or near these trenches will get watered from the saturation of the soil from underneath. This is certainly a very nice and economical way to prepare for the irrigation of a garden on a small scale where a good showing of plants is wanted and not much water can be easily obtained.

Heavy soil should always be well manured and covered a few inches deep with fine sand, or very sandy soil, to make it right for cultivating plants to advantage. This advice will apply whether one resides in the city or the country. When you once get a little place ready for a garden—and getting it fixed just right is frequently more than half the work—everything will then be reduced to a system, and you will feel encouraged to do your best, with the assurance that you will be rewarded with success.

There is nothing in a yard that looks prettier than a lawn. Even if the yard is small, a single patch of grass, with a plant or bunch of flowers growing in the center, will look lovely. But remember that without liberal watering a lawn, in this dry climate, cannot be a success.

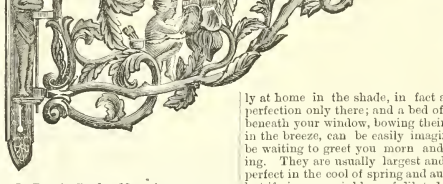
Some one makes the following practical remarks: "Close feeding has the same effect upon grass that close shearing has upon our hedges or ornamental trees. If let alone, they run up tall and the branches are open and straggling, but if they are kept closely sheared, the growth may be so close and fine that a bird can hardly find entrance. So grass, closely fed or sheared, grows thick and fine, and although, to the casual observer, it makes less show, yet it really produces more nutriment to the acre than if left to run up to seed. The lawn mowers, which have come into such general use in villages within the past few years, have proved the advantage of close and frequent cutting for producing a fine thick turf." Of course, it will not pay to get a lawn mower to trim a very small lawn. It can be more economically done by hand.

Last month, we gave directions for planting seeds in boxes, pots, etc. If you have not started your annuals now is the time to commence, and there is little time to be lost. You can start seeds where you want them to grow, if you will observe the following rules: Prepare the soil by spading lightly and raking as fine as possible. It is best if some fine, well-rotted manure is worked lightly in the soil. Now thoroughly saturate the soil with water from a sprinkler. After it is well settled, but while it is still wet, make an impression not over one-half of an inch deep where you wish to drop your seed; drop and cover with sand mixed with saw-dust or fine pulverized manure; sprinkle again, and cover with sacks or paper fastened down to keep the air from drying out the soil, or panes of glass, or even a board can be laid over the seed beds. Every day remove the cover and sprinkle, until you see the young plants, when you may remove the covering. To keep insects from destroying the young plants, sift dry ashes or road dust over them after watering, but not while the young plants are still wet, wait till the moisture has evaporated from their tiny leaves.

If you wish to transplant any of your plants—and you may if they come up too thick—follow this rule, which we clip from the *Germantown Telegraph:* "There is no mode we have tried so effectual in transplanting tomato, cabbage, cantaloupe, or any other tender plants from the hot-bed or from one place to another as to prepare a vessel filled with manure water and rich soil, about the consistency of thin mush, with which the roots of the plants should be well coated and set in a hole made with a sharp round piece of wood or dibble. After being firmly planted, moisten again with manure-water. We have never failed in any transplanting when done in this way, and the trouble is very slight."

In arranging flowers in beds, it is well to observe harmony of colore, and attend to the following rules: "Avoid placing rose-colored next to scarlet, orange or violet. Do not place orange next to yellow, or blue next to violet. White relieves any color, but do not place it next to yellow. Orange goes well with blue, yellow with violet. Rose-color and purple always go well together."

We have given little advice about what varieties of plants to cultivate. Each person has some favorites, and it is well to gratify one's own taste in such matters. Certain plants are considered preferable by very fashionable people, but if plants are suitably and neatly arranged to show to advantage, it matters little what they are. Tall plants should be put where they will not hide the smaller ones.



In Root's *Garden Manual* are some excellent hints, a few of which we take pleasure in copying: "For a screen or background, the larger sorts of Lupines, Hollyhocks, Marygolds and Zinnias produce an excellent effect. To lend a tropical appearance, the larger varieties of Ricinus, set only two feet apart, are valuable. For a close, impenetrable screen or back ground, all the climbers are serviceable. The Cobea Scandens is one of the best, growing rapidly, and on rich soil running twenty feet and more, with abundance of large, bell-shaped flowers. Dolichos is especially valuable for a light soil, and beautiful with its purple flowers and seed-pods. Morning Glory is especially of service in the shade. The Wild Cucumber will grow most thriftily, and cover the objects most effectively of any, and lift clear above its foliage a mass of yellowish white flowers, in hyacinth-like trusses, and for this purpose is very popular wherever tried. Nasturtium, grown with the latter, fills up the vacancies near the ground, and mingles its variously colored bloom prettily with the other, producing an excellent effect."

As to choosing colors for bedding plants, we copy this from Briggs Bros.' *Floral Work:* "Some may desire to fill separate beds with flowers of a single color and of such kinds as will have a fine appearance and bloom the whole season. These may be selected from the Dianthus, Phlox Drummondi, Pansy, Verbena, Salpiglossis, Stocks, Balsams, Zinnias, etc. Red and shades of red—Phlox Drummondi, Zinnia, Portulaca, Catchfly, Aster, Cacaliaecocinea, Cockscomb, Poppy, etc. White — Phlox Drummondi, Candytuft, sweet Alyssum, Dianthus, Stocks, Aster, Portulaca, etc. Blue—Ageratum Mexicanum and Tom Thumb, Lobelia, Aster, Larkspur, Nolana, Nemophila, Whitlavia, Lupines, etc. Yellow—Calliopsis, Eschscholtzia, Sanvitalia, Platystemon, Marigold, Zinnia Haageana fl. pl., Portulaca, Erysimum, etc.

Mr. Root, in his *Manual*, has this to say about flowers for the shade: "Many a little yard in town, deep in shade, could be made beautiful; the shady plat before many a sitting-room window could be made fragrant and blooming, were the planting only judicious. The Morning Glory, hiding from sight all that we would screen, will every morning the summer through give an abundance of bloom in more deeply, delicately, richly tinted colors that the painter's brush can paint. The Adonis, with its pretty, finely-cut foliage and blood-red flowers, flourishes in the deepest shade. To produce the best effect, the plants should stand thickly in the row, five or six to the foot. Sown late in August, it lives through the winter with a protection of stalks and leaves. The Pansy is perfectly at home in the shade, in fact attains perfection only there; and a bed of them beneath your window, bowing their faces in the breeze, can be easily imagined to be waiting to greet you morn and evening. They are usually largest and most perfect in the cool of spring and autumn; but if given a sprinkling of diluted liquid manure occasionally, and thorough waterings in dry times, they will continue of large size the summer through. Calliopsis and Evening Primrose bloom the season through in the shade, quite as well as in the sun. Evening Primrose, Larkspur, and Marvel of Peru, seem to attain their greatest perfection in partial shade. Mignonette seems just as fragrant and quite at home in such situations. Ipomopsis does well in shade or sun. Petunia, Myosotis, Lobelia, Antirrhinum, Sweet Alyssum, Candytuft, and most of the climbers do well in moderate shade where the sun occasionally peeps in. The strong-growing Zinnia does little in vigor or colors if in the shadow."

There is much more that we wanted to say this month, but are pushed for room. One hint more, and we close.

Now is the season for picnics, and if you go into the wild woods, do not fail to gather up some of the plants you may find growing there. Three years ago we gathered in a deep glade, upon rocks, a lot of moss and ferns. The moss was in beds with fern roots running thickly through it. It was little troubled to peel the moss, like a pelt from the rocks. One piece was as large as a blanket and about two inches thick, full of fern roots. When home, we cut it in suitable pieces to line hanging baskets and two wire plant stands, then transplanted into the baskets and stands elegant flowering and leaf and trailing plants. With plentiful watering, the ferns came out thickly with feathery leaves, while the green, velvety moss was just splendid. Such handsome stands and baskets we never saw before, and they are still pretty, though getting a little brown with age, and need reconstructing. Since then, others have followed suit, and now in San Jose such fern-covered baskets are not rarely to be seen.

Domestic.

FAMILIAR TALKS---No. 10.

BY SNIP.

IF Flora will soak her table-cloths in cold water before putting them into the wash-water, I think she will no trouble in getting tea, coffee, or fruit stains out. If it is possible to bleach clothes, the soaking is not necessary. I have no grass plot that can be used for such a purpose, but am so situated that I can leave the clothes on the line all night if I wish, and have no fears of finding an empty close-line in the morning. I used a rope for about three years, and then obtained a galvanized iron wire that I would not exchange for all the rope clothes-lines in the county. It remains out doors all the time; no trouble to put up and take down every week, and it does not break and let the clothes into the dirt; it does not rust, and it takes less time to wipe it off than it would to put up a rope.

I, for one, would like to have Mrs. L. W.'s recipe for washing calicoes and prevent their fading, and in return will tell her how we got rid of lice on our goats. It was simply by greasing them. I think any kind of fresh grease would do. A plentiful supply was put on the back which melted and run down. The ears, face and neck were rubbed well with grease and we had no more trouble.

Pears, if thoroughly ripe, make excellent sweet pickles prepared in the manner that Mrs. L. W. makes currant and peach pickles. If the pears are not entirely ripe, boil them in the syrup about half an hour, not hard, but gently, or they will break in pieces.

Will some one please tell me how to make cucumber pickles, and how old they should be when pickled?

Here are two recipes I cut from an old paper, but they were new to me and may be to some of the readers of the Agriculturist:

TOMATO SOUP.

Boil one pint of canned tomatoes for twenty minutes in one pint of water; add half a teaspoonful of soda, and one pint of milk. Season with butter, salt and pepper and crackers as for oyster soup.

POTATO PUFF.

Two cups cold mashed potatoes; add two tablespoonfuls melted butter, beating to a cream; two well-beaten eggs and one cup cream or milk. Bake in a quick oven.

BAKE-DAY CAKE RECIPE.

After kneading your bread save dough enough to fill three tea cups; add one and a half cups of sugar, one cup butter, two well-beaten eggs, and one cup of seedless raisins; work all thoroughly together with the hands; let it stand in a warm place half an hour; make into one large loaf.

Mrs. L. W.

Apiary.

Six Months Among the Bees in California.

THE "BLUE SIDE" OF THE QUESTION.

YOU have had in your journal from time to time, during the past year, many rose-colored reports from this country, which are inclined to mislead your army of readers at the East, who have felt an interest in this land of honey. A few items of other facts may also be of interest to your readers, from one who has had pretty good facilities for "learning the ropes," though I do not profess "to know it all," yet.

The first thing an apiarist does after his arrival here, is usually to hunt up a "ranch," or location, on which to establish his apiary. This is usually located on government land, after many weeks search, and may then turn out not to be a good one. The main point is to get within the granite or bee range—a strip of mountainous country 8 or 10 miles wide, extending from Lower California up into Los Angeles county, over 100 miles long.

To select a location here intelligently, one needs to be somewhat of a botanist, or at least to know by sight all the different kinds of honey-plants, their order of blooming, and the relative quantities of each required. Of course one cannot find everything just as he would order it; but take as near a perfect pasture as he can find. In the early days of bee-keeping as a business in San Diego county, the ranches were established on the Sweetwater, a "California stream," which runs out east from just south of the town of San Diego, among the mountains. It is only within the past two years, or since the great excitement began, that other localities were sought for further north. At this writing nearly every location, good, bad or indifferent, has been settled on as far as Temecula, 75 miles north of San Diego, to which point all the products of the apiary have to be carried in wagons, and all supplies brought out, making it very expensive to carry on the business. The roads generally are good, but as all the mountain ranges tend from the seashore toward the southeast, it is easily seen that there are some heavy grades. All or nearly all the teams we meet in traveling are four or six horse—two to draw the wagon, and the balance the load.

There are few "old settlers" except "greasers," or Indians and Mexicans. The former are half-civilized, dress like whites, live in adobe huts, and either herd their own flocks of cattle, sheep or horses, or else are herders for the Mexican stock men. Since the great rush and settlement in Los Angeles county, which lies next north of this, the larger portion of the sheep men have had to search other and less populated sections for their flocks.

Many thousands of sheep were driven into this county, where they are now overstocked, many herds decreasing in numbers from insufficient food or water. The price, too, this fall for the wool—9 cents or 10 cents—has disgusted many with the business.

Cattle and horses will not feed after sheep.

The stock men dislike to see new settlers come in, as the laws here require herding of stock or suits for damages. The "bee men", too, dislike to see stock around them, particularly sheep; for although they eat but sparingly of the white sage and other honey-producing plants, they break down the brittle stems, and soon wear out a fine field.

California is famed for its freedom from insect pests injurious to fruit. While that may be true, it nevertheless is quite true that a worm was found in nearly every white sage flower last spring, which will account for the rarity of pure white sage honey in market this year. This worm, with the April frost and extreme dryness of the season, cut off the crop of honey to an average of not over 25 lbs. per hive, and an increase of not over 25 per cent. Indeed, I know of one apiary of 250 stocks which gave but two swarms this whole year, and when I was there last—at the end of the busy season—the owners had taken but 99 cases of honey. One other apiary of 150 stands came out equally bad, and both did remarkably well last year. One apiary of 500 hives did not give a single pound of surplus. I have heard of but half a dozen or less in this whole county who have made enough to pay expenses, counting the time and attention required as anything. One gentleman had 150 stands, hired an experienced apiarist at $45 per month and board. In return he got seven cases, or 400 lbs. of box-honey, and an increase by dividing of some ten or twelve stands. There are many long faces among the bee men, and many a poor fellow would like to sell out and quit. I sincerely believe that for a man who understands the business, and whose heart is in the work, bee-keeping here will pay in the long run; still, I think some changes in the prevailing methods of gathering and marketing the products are necessary.

It seems that there has never been any effort made to save the large surplus of honey from the manzinita and blue sage, which bloom in January and April, because they do not produce quite so white a honey as the white sage, and yet many a hive at these times becomes too full of stores for the good of the colony.

At the time (May 20th to July 20th) when the white sage is in bloom, the sumac and grease-wood also yield fully as well. The color of the sumac honey is several shades darker than either of the others, so that it is rare to find sections filled exclusively of either sort.

Possibly the extractor will be reverted to, at least to give it a fair trial to know whether or not it will pay.

Those who are engaged in bee-keeping rarely do anything else, consequently each one has to watch carefully for the best reward for his labor.

There are few cultivated farms in the country, which are as large as a good sized state—the habitable portion being about 60 miles east and west, and 100 miles north and south. Take either of the two roads leading up north from San Diego, you may travel twenty miles and not see a cultivated field. It is a constant warfare to get and keep things growing. The gophers, ground squrrels (grey and but little smaller than the grey squirrel at the East) and kangaroo rats are omnipresent, eating the seeds or young plants as they appear. Dozens give up in despair of raising even their own vegetables on this account. Some of the land is *moist*, on which, if properly guarded, nearly everything will grow, and with marvelous rapidity. But such land is the exception, and wherever found in any considerable quantity, it is pretty sure to be covered by a grant, and consequently not to be settled on.

Very little rain falls from April to November—in fact but one shower has fallen since May 1st, and that wet the parched soil but from two to four inches, and was speedily dissipated under the succeeding days of sunshine.

I have not seen any estimate of the relative proportions of cultivable lands too worthless, but my judgement is that not one acre in fifty is good for any purpose of cultivation. The mountains and in fact almost the entire country is bare of trees. The extreme dryness of the climate producing only bushes of a stunted growth averaging five feet high, over tens of thousands of acres in one body.

The principal bush and at the same time, the most worthless for bees, is the chemise or chemisel—a harsh, rough bush from 4 to 6 feet high, through which it is impossible to go either on foot or horseback. The little forays occasionally made upon it only result in torn clothes, bleeding hands and bad tempers. Of course in such a country, from the great scarcity of timber, wood is high and not of good quality.

Such as is taken to market being either small limbs of an inch in diameter, or short, crooked, intractable sticks, which successfully resist the ax, but bring a good price in money. Of churches, there are several in San Diego—not one, to my knowledge, in the country outside the city, except Catholic, and the service in these is usually carried on in Spanish.

There are a few school-houses, but the people live so far apart that the children cannot attend. It is twelve miles from where I am located to the nearest school-house or any other public building.

As a consequence, the children must be taught by their parents, or allowed to grow up in ignorance.

The idea seems to prevail that all are here temporarily—that as soon as enough is made to live on elsewhere to pick up and leave.

Physcians are rare outside the town of San Diego—and when called upon to go out 20 to 50 miles to attend a case, their charges are simply extortionate. I recall one case of a charge of $1,000 for going 50 miles.

It is all very well for people at the East to keep bees, where they are surrounded by the comforts and amenities of life—they *ought* to have some drawbacks, for on coming here, one abjures comfort, society—everything.

To place a man alone on a bee-ranch for a year, he is a fit subject for a lunatic asylum—the solitude is terrible. The oppressive silence of these canyons and mountains with no trees through which the light winds can sigh, the nearly entire absence of birds of song to gladden the heart; the distance to neighbors, all contribute towards the feelings one might have in solitary confinement.

Coming to California, you give up forever all your old associations and enter a new world. The trees, the flowers, the birds, the climate, the soil, the sky—all differ from what one has been accustomed to from childhood.

It is true they call many trees, bushes and birds here by the same names they do at the East, but you fail to recognize them, and soon come to the wise conclusion to accept everything as strange.

While the farmer has so many difficulties in the way of getting crops to grow, all is not plain sailing for the apiarist. The moth miller has twelve months in a year here to work. Skunks and ants abound.

A skunk will get up in front of a hive and tap on the front of it until enough bees come out and get entangled in his hair for a meal, when he will roll over and over until the poor bees are crushed or stunned, and then he will eat them. Poison, or traps, have to be regularly inserted to keep them from despoiling an apiary.

Of ants there are many kinds: from the wee red one of one-sixteenth of an inch in length to those of an inch or more.

On account of these legions of ants, they have to make stands for their hives to set on, and keep the legs greased with coal-oil or axle-grease, or any other nauseous thing to repel them. Houses intended for honey have to be set on stilts, which are kept greased to keep out the pests. This is really the plague of the country; and any man who will invent an "Ant Destroyer." sure to kill or drive them away, can come and make a small fortune selling it.

The water is generally good, though hard, and is usually found at less than 30 feet in depth. I do not know of any artesian well in the country, but would suppose they would be tried, to avoid the great loss of crops during the long seasons of drouth.

In the town of San Diego, the water is not good, but such as it is, is sold at the rate of three cents a bucketful.

The Water Company is now trying to remedy this by pumping water from the bed of the river of the same name. Nearly all the water we get from wells is warmer than the outside air, when first drawn, so that you have to let it stand and cool. Ice is out of the question. A little is brought down from somewhere up toward the North Pole, and sold at 5 cents a pound.

Those of us who keep horses, usually have to by hay for them or submit to their getting too poor to do any work during the long dry season.

Hay in this country is not the hay of the Eastern States. It is wheat, barley or oaten straw, cut while yet green. This is often hauled fifteen to thirty miles, as it is only at rare intervals that any is grown.

The seasons here are two—the wet and the dry. The former extending from December to March, during which time rain usually falls in sufficient quantities to overflow the sand in the beds of the streams, and even create a torrent through which, over the treacherous quicksands of the streams it is dangerous to cross. Some of the streams are bridged, and few have steep banks where the roads cross them. At this season of the year, the real summer in California, the country gets green and is beautified with flowers.

With the advent of March, the ground dries up, vegetation dies, and by the first of May the country looks parched and brown. From this time on to December, the same state exists, with nearly the same temperature.

The climate, meantime, is superb. Nothing any of us have ever been accustomed to will equal it. And this one thing, *climate*, is the great charm of the country. I have not heard it thunder but once in six months, and that was a weak roll. Neither have I felt any strong wind during the same time.

The nights are invariably calm, or with the gentlest of low breezes wafting the deliciously soft air across the sea. The early mornings are often foggy and nearly calm until nine or ten a. m., durduring which time, if it chance to be clear, is the hottest part of the day. Then the sea breeze springs up, gently at first, increasing to a fair breeze by one or two p. m., and then dies down again, and thus will go the rounds—the same thing day after day, week after week, and month after month.—*G. F. Merriam, San Diego, Cal., in American Bee Journal.*

A MAN said to his gardener: "George, the time will come when a man will be able to carry the manure for an acre of land in one of his Waistcoat pockets." To which the gardener replied: "I believe it, sir; but he will be able to carry all the crop in the other pocket."

Hygienic.

PRACTICAL HEALTH TOPICS---NO. 3.

BY "JEWELL."

SLEEP.

DO all the mothers who read the AGRICULTURIST feel the deep importance of sleep for their infants and growing children? This is a question I have often thought of, and in watching my neighbors and friends, patients and strangers, when opportunity offeres, I have about arrived at the conclusion that few even think upon the subject, and a small proportion act upon their convictions. The consequence is, we see sickly, pale, delicate, stunted, nervous girls and boys about us, and frail, *dying* men and women. (I use strong language, because the case is a desperate on and requires prompt action on the part of parents and teachers.)

We will not stop to question who is to blame. Everyone who knows and feels the importance of raising strong, robust men and women to take our places in this world of action is to blame who quietly looks on, and sees civilization turn the night into day, and does nothing to warn the people of the danger sure to follow. I could begin by quoting the sayings of celebrated physicians and eminent writers upon this subject—which, perhaps, no one would read or follow, simply because society governs our habits of life to such an extent that even those very doctors and writers seldom follow their own prescriptions, but make willing sacrifices of their lives waiting on others for the good of humanity.

Many of our amusements and entertainments are at night; our lectures, concerts, social gatherings, church fairs, are nearly all held in the evening. Even revival meetings are carried on to the greatest extent at night, often lasting till after midnight, when the participants are in too excited a condition to calmly go to bed and sleep that quiet, refreshing sleep which alone enriches blood and brain. And yet this is a Christian land, and they claim to be working for the love of God and our good in these very revivals and protracted church meetings, while breaking a law of health. Are not our bodies the true temples of God? and does he not require that we keep them pure and holy, and uncontaminated by the world? Let us not discard any element of common sense from our religion. Perhaps we may learn from the Adventists and Mormons somewhat of good in this connection. For instance, Brigham Young has issued a decree that all entertainments are to begin at two in the afternoon and not last after ten o'clock at night; while the Adventists insist on rules of health as truly as any other in their creed.

I have seen mothers awaken their infants to show them to a friend, and others who thought it would make the children stupid to sleep so much; while it is a common practice to awaken the household at a certain time in the morning, so as to get the children to perform certain duties before school time.

Now this is all wrong. Children need, and *should have*, from ten to sixteen hours, out of twenty-four, good, sound, deep, quiet, sleep, with plenty of light, warm covering on, and plenty of fresh air, but no draughts. Eight o'clock should find every child under sixteen years old fast asleep, every night. This would give the parents one hour of quiet to read or chat before seeking their own rest. But how can this be done when we have so many calls out of an evening? Indeed, if we want to enjoy any social life we must lay aside our principles of right and join in with the masses. Even the children have their *evening* parties and Christmas entertainments at night, and some are allowed to go with their parents to church socials and the like, while many parents are obliged to take their children with them or stay at home. The old saying, "one hour before midnight is worth two after," is a true one; and regularity in sleep is very essential to children and grown folks, too. To the sick, sleep is their greatest restorer and best friend, as all know; without it, the physician's skill is useless, and all his knowledge powerless to make well.

Looking upon the American people as a "nation of invalids," as we are, the cry seems to come from our cradles and our tombs, "Give us more sleep!"

THE DOCTOR SPEAKS.

BY HELENA.

Listen, girls, for it is not often that he gives advice unasked. He tells us, in the first place, to dress lossely so that we can expand our lungs to the utmost with each breath we draw. Also, that the clothing should hang from the shoulders, instead of resting upon the hips. Corsets, he says, are a species of straight jacket, only worn in these enlightened days by those who are slightly demented. A back bone is preferable to a front one any time to keep the person erect, and the corset board is no more needed for the one one sex than for the other.

He tells us, girls, to avoid stimulating drinks of every kind, while we are yet young, so that as old age creeps on we may not find ourselves the victims of an uncontrollable appetite. Food alone nourishes the body, and by it every function in the living organism derives necessary support. Regular daily exercise in the open air is indispensable to good health. As our happiness and usefulness depend upon the physical condition of our bodies, we need use every means in our power to become as healthy as possible.

Then hear what he says about late hours: Sleep is the natural invigorator of the system. One-third of each twenty-four hours should be allowed for rest. Retire early, for one hour before midnight is worth two after. Then rise with the sun, for the morning hours are the cream of the day.

He has a word for the mothers, too, who teach their daughters a variety of indoor industries instead of encouraging them in open air tasks. Horticulture is one of the finest employments for women. Hire a cook, and set the girls to work in the garden. Plant vegetables, weed the garden beds, breathe fresh air and sunshine, instead of paying a gardener, and you will surely save the doctor's bill, besides having the satisfaction of seeing a merry group of hungry ones assemble around the table at meal time.

Rightly clothed and properly fed, with daily exercise in the fresh air and sunshine, serve to prepare the mind for activity to grasp whatever comes within reach. See to it, then, parents and guardians of the young, that the proper sort of reading matter is placed before them. Let their hours for study be during the sunny part of the day, and not prolonged beyond the strength, or until fatigue is felt.

He says that the thousand and one contrivances for killing time, so common among women of the present day, such as fine embroidery, fancy work, etc., are sapping the health of the nation. Who but the wives and mothers of coming generations should demand health as their inheritance? And thoughtful people every where would do well to listen and profit by what they hear when the doctor speaks.

FRIENDLY LETTERS--No 3.

BY MRS. M. E. T.

MEDITATIONS.

In bed, propped up with pillows, and in my arms six pounds of frail humanity, so frail that a breath might almost blow him away—thus I am resting and thinking. Outside the sun is shining, the birds singing, and all nature seems rejoicing. I look at the dear baby-face and wonder if I shall keep it. I think of my own aching body, and the everyday sameness of life to which I am bound by a chain of circumstances, and I wish that I, too, like my invalid friend, could enjoy the fresh mountain air.

Since my letter must necessarily be brief, permit me, in conclusion, a few remarks to your correspondent "R. A. E.," to whose kind inquiry I would say, No; O no! not satisfied after the manner of your supposition, for I think we agree with regard to the consequences of violating nature's laws. *That* is just where the trouble originates. The manner and customs of life of the majority of American women are sufficient causes for all the ills that flesh is heir to. But these evils have come so gradually upon us, and in such a variety of ways, that in many cases we are powerless to help ourselves individually. Nothing short of an united effort; and God speed the day when intelligent women shall, together, resolve to throw off the yoke of bondage that binds them now to such cruel burdens—the burdens of folly and fasion.

Something Which Concerns Everybody.

There lies a book before us written by Br. William Hargreaves, entitled "Our Wasted Resources." We wish that the politicians and political economists of this country could read this book, and ponder well its shocking revelations. They are revelations of criminal waste—the expenditure of almost incalculable resources for that which brings nothing, worse than nothing, in return. There are multitudes of people who regard the temperance question as one of morals alone. The men who drink say simply, "We will drink what we please, and its nobody's business. You temperance men are pestilent fellows, meddlesome fellows, who obtrude your tuppeny standard of morality upon us, and we do not want it, and will not accept it. Because you are virtuous, shall there be no more cakes and ale?" Very well, let us drop it as a question of morality. You will surely look at it with us as a question of national economy and prosperity; else, you can hardly regard yourselves as patriots. We have a common interest in the national prosperity, and we can discuss amicably any subject on this common ground.

During the year 1870, in our own State of New York, there were expended by consumers for liquor more than one hundred and six millions of dollars, a sum which amounted to nearly two-thirds of all the wages paid to laborers in Agriculture and manufactures, and to nearly twice as much as the receipts of all the railroads in the State, the sum of the latter being between sixty-eight and sixty nine millions. The money of our people goes across the bar all the time faster than it is crowded into the wickets of all the railroad stations in the State, and where does it go? What is the return for it? Diseased stomachs, aching heads, discouraged and slatterny homes, idleness, gout, crime, degradation, death. These in various measures, are exactly what we get for it. We gain of that which is good, nothing—no uplift in morality, no increase of industry, no accession to health, no growth of prosperity. Our State is full of tramps, and every one is a drunkard. There is a demoralization everywhere, in consequence of this wasteful stream of fiery fluid that constantly flows down the open gullet of the State.

But our State is not alone. The liquor bill of Pennsylvania, during 1870, was more than sixty-five millions of dollars, a sum equal to one-third of the entire Agricultural product of the State. Illinois paid more than forty-two millions, and Ohio more than fifty-eight millions. Massachusetts paid more than twenty-five millions, a sum equal to five-sixths of her agricultural products, while the liquor bill in Maine was only about four millions and a quarter. Mr. Hargreaves takes the figures of Massachusetts and Maine to show how a prohibitory law does, after all, reduce the drinking; but it is not our purpose to argue this.

What we desire to show is, that with an annual expenditure of $600,000,000 for liquors in the United States—and all the figures we give are based upon official statistics—it is not to be wondered at that the times are hard and the people poor. Not only this vast sum is wasted; not only the rapital invested is diverted from good uses, and all the industry involved in production is taken from beneficent pursuits, but health, morality, respectability, industry, and life are destroyed. Sixty thousand Americans annually lie down to a drunkard's grave! It were better to bring into the field and shoot down sixty thousand of our young men every year than to have them go through all the processes of disease, degradation, crime and despair through which they inevitably pass.

With $600,000,000 saved to the country annually, how long would it take to make these United States not only rich, but able to meet, without disturbance and distress, the revulsions in business to which all nations are liable? Here is a question for the statesman and the politician. Twenty-five years of absolute abstinence from the consumption of useless, and worse than useless liquors, would save to the country fifteen billions of dollars, and make us the richest nation on the face of the globe. Not only this sum—beyond the imagination to comprehend—would be saved, but all the abominable consequences of misery, disease, disgrace, crime and death, that would flow from the consumption of such an enormous amount of poisonous fluids would also be saved. And yet temperance men are looked upon as disturbers and fanatics! And are adjured not to bring temperance into politics! And this great transcendent question of economy gets the go-by, while we hug our little issues for the sake of party and of office! Do we not deserve adversity?

Dr. J. G. Holland, in Scribner's Monthly.

The difference in the amount of labor performed by a well fed man or animal and an ill fed one is considerable. There is no real economy in placing the laborer upon a starvation diet. Abundant and good food give bodily strength and contentment of mind which is an important item.

The Dairy.

The Highway Cow.

The hue of her hide was a dusky brown,
Her body was lean and her neck was slim,
One horn turned up and the other down,
She was keen of vision and long of limb,
With a Roman nose and a short stump tail,
And ribs like the hoops on a home-made pail.

Many a mark did her body bear;
She had been a target for all things known,
On many a scar the dusky hair
Would grow no more where it once had grown,
Many a passionate parting shot
Had left upon her a lasting spot.

Many and many a well-aimed stone,
Many a brickbat of goodly size,
And many a cudgel, swiftly thrown,
Had brought the tears to her bovine eyes;
Or had bounded off from her bony back,
With a noise like the sound of a rifle crack.

Many a day had she passed in the pound,
For helping herself to her neighbor's corn,
Many a cowardly cur and hound
Had been transfixed on her crumpled horn,
Many a tea potand old tin pail
Had the farm boys tied to her time-worn tail.

Old Deacon Gray was a pious man,
Though sometimes tempted to be profane,
When many a weary mile he ran
To drive her out of his growing grain.
Sharp were the pranks that she used to play
To get her fill and to get away.

She knew when the deacon went to town;
She wisely watched him when he went by;
He never passed her without a frown,
And sat on his gloom in each angry eye;
He would crack his whip in a surly way,
And drive along in his "one-hoss shay."

Then at his homestead she loved to call,
Lifting nie bars with her crumpled horn,
Nimbly scaling his garden wall;
Helping herself to his standing corn,
Eating his cabbages, one by one;
Hurrying home when her work was done.

Often the deacon homeward came,
Humming a hymn from the house of prayer,
His hopeful heart in a tranquil frame,
His soul as calm as the evening air,
His forehead smooth as a well-worn plow,
To find in his garden that highway cow.

His human passions were quick to rise,
And striding forth with a savage cry,
With fury blazing from both his eyes,
As lightnings flash in a summer sky,
Redder and redder his face would grow,
And after the creature he would go.

Over the garden, round and round,
Breaking his pear and apple trees,
Tramping his melons into the ground,
Overturning his hives of bees,
Leaving him angry and badly stung,
Wishing the old cow's neck was wrung.

The mosses grew on the garden wall;
The years went by with their work and play;
The boys of the village grew strong and tall;
And the gray-haired farmers passed away.
One by one, as the red leaves fall;
But the highway cow outlived them all.

All earthly creatures must have their day,
And some must have their months and years;
Some in dying will long delay;
There is a climax to all careers;
And the highway cow at last was slain
In running a race with a railway train.

All into pieces at once she went,
Just like the savings banks when they fail;
Out of the world she was swiftly sent;
Little was left but the old stump tail.
The farmers' cornfields and gardens now
Are haunted no more by the highway cow.

—[Eugene J. Hays.

PUERPERAL OR MILK FEVER.

MANY valuable cows are lost every summer from the disease known generally as the milk fever. The name, "milk fever," probably arises from the sudden drying up of the milk. Cows are usually attacked with the puerperal fever the second day after calving; and at the time of having the third calf seem to be the most susceptible.

This is one of the many cases where prevention is better than cure, although cure is not always impossible. But a cow never seems to fully recover from the effects of such sickness. In order to use means for its prevention, it is quite essential that the causes should be well understood, as also the nature of the disease.

Cows low in flesh and not over-fed about the time, and just before calving, seldom or never are troubled with the disorder. It is the full, fleshy and well-fed cow that is in danger. The fever arises from congestion of the womb, which, instead of contracting after the birth of the calf, the blood-vessels become surcharged with blood from inflammation, and if not relieved mortification soon ensues.

High feeding, upon such food as is constipating, is the cause. In other words, the system is filled with rich blood, and in this condition a fever is sure to result from inflammation. A low diet, of a loosening nature, such as green grass and bran mashes, is the best a week or two before the cow calves. The bowels should not be allowed to become constipated. Many persons naturally think that, in order to make the cow give a good flow of milk, it is best to feed highly of rich food a while before she has her calf. And this high feeding is the very worst thing that can be done. A low diet of green grass or other physicking feed, so as to keep the bowels free and the blood thin, is a sure preventive. With thick, rich blood, and warm weather coming on, together with high feeding, the increased digestive powers of the cow at this period so oversupplies the system that a morbid action with non-contraction of the uterus is almost sure to follow with all the serious consequences.

Should the cow be discovered to be sick a day or two after calving; if she fails to notice her calf, is listless, does not rise, and staggers at the attempt; if the eyes are glassy and cannot wink, the head hot, and apparently in great pain—the case is one of milk fever.

The treatment must be immediate, for the disease runs its course in a few hours. Physic with a pound of epsom salts and give enemas of soap suds to immediately relieve the bowels, as they are always constipated in such a fever, and unless they are freed the cow cannot recover. The brain is affected with congestion, usually, in sympathy with other affected organs. Keep the head cool with water or ice; and with hot water, blankets and hot bricks keep the body about the hips warm, with an occasional dash of cold for reaction. Give cold water as often as she will drink, but do not give any kind of stimulants or food until after recovery is certain.

Jersey Milking Can.—This can is of tin, globular, with a flat bottom and a rim around it. The upper part of the globe open, and has a flaring top, which is about eight inches in diameter at the edge. A handle, like a pitcher handle, is upon one side, attached to this flaring top. When in use, a rather closely woven linen napkin is tied over the top, and under the handle, so that it will sag down into the can to a depth of three inches or so. In this sag of the strainer a sea-shell is laid—one of the shells of a scallop being usually employed. The streams of milk strike into the shell, and the foam soon rises and nearly fills the strainer; specks of falling dirt mostly rest upon the top of the foam. Those which are carried down wash over the edge of the shell and lie beneath it. There is no spattering, and the milk is obtained entirely free from hairs and dirt, while soluble dirt which sometimes falls in, comes as little as possible in contact with the milk.—*Jersey City Journal.*

Questions for Dairymen. — Every dairyman should have a list of questions posted in some suitable place on his premises where his family and those in his employ, as well as his visitors, will have an opportunity to read them frequently. We give some questions, but the list can be extended:

Do your cows feed in swamps and on boggy lands?

Have you good, sweet, running water convenient for stock, and is it abundant and permanent in hot weather?

Have you shade trees in your pasture, or do you think that cows make better milk while lying down to rest in discomfort in the hot, broiling sun?

Do you use dogs and stones to hurry up the cows from pasture at milking time—thus over-heating their blood and bruising their udders?

Do you cleanse the udders of cows before milking by washing their teats with their own milk, and practice further economy by allowing any droppings to go into the milk pail?

Do you enjoin upon your milkers to wash their hands thoroughly before sitting down to milk, or do you think that cleanliness in this respect is not important for milk that is to be treated for butter making?

When a cow makes a mis-step while being milked, do you allow your milkers to kick her with heavy boots, or to pound her over the back and sides with a heavy stool, accompanied by sundry profane remarks addressed to the cow to teach her manners?

Is the air about your "milk barn" or milk house reeking with foul emanations of the pig sty or manure heap, or other pestiferous odors?

Good, fresh, clean water, and in abundance, is one of the most important requisites for milch cows, and it should be in convenient places where stock will not be required to travel long distances to slake their thirst. If springs and running streams cannot be had in pastures, a good well, with wind-mill and pump, makes an efficient substitute, and the waste water may, if necessary, be conducted back into the well, so as to keep up a constant supply of good, fresh water.—*Willard's Butter Book.*

About Milking.—Five per cent., and perhaps ten, can be added to the amount of milk obtained from the cows of this country, if the following rules are inexorably followed:

1—Never hurry cows in driving to and from the pasture.

2—Milk as nearly at equal intervals as possible. Half-past five in the morning and six at night are good hours.

3—Be especially tender of the cow at milking time.

4—When seated draw the milk as rapidly as possible, being always certain to get it all.

5—Never talk or think of anything besides what you are doing when milking.

6—Offer some caress, and always a soothing word when you leave her. The better she loves you the more free and complete will be her abandon as you sit by her side.

We append the not uncommon practice:

1—Let some boy turn the cows away, and get him who is fond of throwing stones and switching the hind ones every chance he gets.

2—Milk early in the morning and late at night, dividing the day into two portions, one of fifteen hours and the other of nine.

3—Whack the cow over the back with the stool, or speak sharply to her if she does not "so" or "hoist."

4—Milk slowly and carelessly and stop at the first slackening of the fluid.

5—Talk and laugh, and perhaps squirt milk at companion milkers, when seated at the cow.

6—Keep the animal in a tremble all the time you are milking, and when done give her a vigorous kick.

Brine that Will Preserve Butter a Year.—Among the many devices for keeping butter in a manner that will preserve the fresh, rosy flavor of new, with all its sweetness, is the following from the Duchess *Farmer:* To three gallons or brine strong enough to bear an egg, add a quarter of a pound of nice white sugar and a tablespoonful of saltpetre. Boil the brine, and when cold, strain carefully. Make your butter into rolls, and wrap each separately in a clean, white muslin cloth, tying up with a string. Pack a large jar full, weight the butter down, and pour over the brine until all is submerged. This will keep really good butter perfectly sweet and fresh for a whole year. Be careful not to put upon ice, butter that you wish to keep far any length of time. In summer when the heat will not admit of butter being made into rolls, pack closely in small jars, and, using the same brine, allow it to cover the butter to the depth of at least four inches. This excludes the air and answers very nearly as well as the first method suggested.

Milking Stools.—Let me tell how to make what I call a convenient stool. Take a piece of board about 8 inches wide and 2 feet long; nail short pieces across the ends to increase its strength and to bore holes through; put two legs 8 or 10 inches long in one end, and one a trifle shorter in the forward end. Place the stool where you intend to sit, the one-legged end where you usually set the pail. Place the pail on that end of the stool and sit on the other. If you do this you will have your pail out of the dirst and the cow cannot easily put her foot in it, as often happens when the pail is on the ground. Some cows are so low that you are obliged to set the pail on the ground. In such case turn your stool around.—*Farmer's Daughter, in Western Rural.*

[We have tried many ways of milking, and have found it most convenient to have a small, three-legged stool, and then spread a common barley sack that is ripped open across the knees and hold the pail between the knees. The sack assists in holding the pail steady, and also prevents the milk spattering upon the clothes.]

Curing Rennet.—Take the stomach of the calf fresh from the butcher, clean and salt, and pack in an earthen jar with brine. A few weeks previous to use they are taken out and drained of all brine, and dried. Take a forked limb of a bush and spread the rennet over it. It will be well to add a small lump of saltpetre to the brine in which the rennet is placed. When it is wanted take several small pieces two inches square and steep in warm water, allowing them to soak over night. A pint of water is sufficient. This will give a solution sufficient to "kurd" 100 gallons of milk. Flavored spices may be added to the solution if desired.

Swelled Bag.—When a cow's bag becomes swelled, a simple and generally effectual remedy is found in applying fresh lard, which should be thoroughly and repeatedly rubbed in. Some people use beef brine instead of lard, with good results. Plenty of rubbing without any application will often effect a cure. The calf should be allowed to suck until a

cure is effected, and if a portion of the milk is drawn from the cow before he is given his rations, so he will be obliged to do a good deal of stripping, he will help to reduce the swelling.

Whoever employs the violent remedies should understand that they may do more than is desired. Iodine affects the secretions powerfully, and causes the absorption of tumors and abnormal growths; may it not also cause a decrease in the secretion of milk? We have found that persistent rubbing and kneading was better than anything else. If the bag be very tender, as it often is, take a teaspoonful of tincture of arnica in water, and rub the same diluted with twice as much water upon the bag, to take our the soreness.

Water for Dairy Cows.—The Canada *Farmer* truly says that no animal should be required to drink water which the owner himself would refuse, and especially so if that animal is the cow from which you hope to make good butter. It is sufficient on this point to say that pure water is an indispensable article to the success of the dairyman, for good butter or cheese cannot be made where good water cannot be obtained.

It has been discovered, says an exchange, that cows that do not give down their milk may be cured of the habit by milking with only one hand at a time. This is said to be nearly imitating the calf, which ever asks for but one teat at a time, and hence the greater certainty in obtaiuing the milk. This has been proved a sure remedy for cows withholding their milk, at least in one inveterate case, and it may be worthy of a general trial.

Warts at the end of the teat are occasionally found, and are a great annoyance, not only obstructing the milk, but from their soreness causing the cow to become fidgety and uneasy while milked. In such cases they must be removed, either by the knife, or by a ligature of fine silk tied round it; the latter is the preferable mode, as warts when excised with the knife are more liable to return than when sloughed off.

Horticulture.

ORANGE GROWTH AND CULTURE

Valuable Information for California—Horticulturists' Practical Hints and Advice, Based on Thirty Years' Experience—Etc.

From the S. F. Bulletin.]

The State Department, a few months ago, issued a circular, addressed to all United States Consuls in foreign ports wherever tropical fruits are cultivated, requesting them to report upon the mode, conditions and extent of culture within the districts under their observations. This circular was issued at the instance of Senator Sargent, with a view to obtaining information that might be turned to practical account in various portions of California. The first response is now at hand. It comes from Edward Gillespie, our Consul at San Jose, Lower California, and abounds in valuable observations founded upon the experience of thirty years' residence in that country, and derived also, as he states, from the opinions of the most successful fruit-growers with whom he has, during so prolonged a period, been brought in contact.

Climatic conditions—artificial protection.

Mr. Gillespie writes as follows: First, I must state that a considerable difference is found in the orange fruit grown in different localities in this district; and I attribute this more to a difference of soil than of climate, for, although the temperature changes as you ascend the Sierra, yet, as far up as gardens are found, it does not fall to the freezing point. The rainy season here occurs during the summer months, and therefore the leaf or bud are not liable to cold storms. The leaf has its time to fall, but the incessant production of the new preserves the tree in its perpetual green. Any thing that blights or injures the leaf destroys or deteriorates the fruit, and, therefore, in a climate like that of San Diego, artificial means of protection must be resorted to, or sheltered spots selected for the groves. The fog from the sea is also injurious. A gentleman living near the beach at Cape San Lucas had some apparently fine trees in his garden which bore very little fruit, and that small and acid, and always on the leeward side from the sea breeze. He was an Englishman, and had seen wall fruit, and this reminded him of an idea; so he built, at little expense, a fence of long poles three feet apart, interwoven with brush (what they call here *cerco enramado*), some fifteen feet high, hiding its deformities by wild running vines. After that, all lower branches every year were filled with good fruit.

Selection of soil—mode of planting—irrigation—etc.

Now, as to the soil, there is no question that the rich alluvial of the bottom lands or mould of the valley is best for the production of fruit, though manuring may be a good substitute elsewhere. In a mixture of soil and gravel, or even in rocky soil, however, the tree thrives equally well. In fact, if you plant your tree in a crevice of rock, where there is sufficient soil below for the roots to expand, it is at home, but the fruit is not sweet, so full of juice, or so large. It is claimed for it however, that it ripens earlier.

The earth about the roots should be kept moist, but it is not necessary to deluge the ground near the trunk, and least of all with cold well water or water impregnated with minerals. The practice here is to irrigate every eight days.

Some of those who have the finest trees and best fruit here give their advice decidedly against ever transplanting the orange tree, and I have examined several trees which seem to warrant the assertion. The experiment is recommended of planting the seed four or five in a hill, with the hills twenty-five feet apart each way, and rooting out afterwards all but one plant, the best in each. The seed is planted here from November to January, as soon as the fruit is ripe and the seed dry. The tree is transplanted two years afterwards in the last of January or the first part of February, during the full of the moon. The orange tree is never grafted here now. All trials have resulted in a dwarfed body and inferior and diminished yield of fruit.

Pruning and care of the young tree.

There is a difference of opinion as to pruning. The general conviction is that the lower limbs should not be cut off more than six feet from the ground. The sprouts below this should be removed immediately when they appear, for they thrive with wonderful vigor on the tree and roots at the expense of the vitality of the fruit branches above. All superfluous limbs should be cut off and shortened in the spring. It would be commonplace to advise against allowing dead or dying limbs to remain on the tree. I should say the same regarding any limbs that appear sickly, producing a small and imperfect leaf. But the symmetry of the tree must be preserved as far as possible, not crowded by too much growth of wood, and thorns kept down with constant care. A fruit-grower requires no advice of this kind, and understands that the orange is a delicate tree and cannot thrive under neglect. To produce superior ruit it requires attention and cleanliness; and without this the tree, as it advances in age, becomes deceased or loses its vigor.

The time for thorough pruning and shortening the limbs here is the last of January. No mulching is done here or root-pruning; and the practice among our nurserymen of thinning out the fruit when overloaded is unwisely neglected.

The yield of fruit — how it can be gathered so as never to rot.

The orange tree, if taken care of, lives to a great age. It begins to bear at six years, and, on attaining its growth will give from 1,500 to 2,500 oranges in a season. The tree here blossoms in March, and bears from the last of September to December.

Too much care cannot be taken in gathering the fruit, which, if the thorn has been kept properly clipped, can be reached and cut off by a dexterous hand without even squeezing. Much harm is done by allowing it to be bruised. Of all things, it must not be plucked; the stem should be cut off close to the fruit. With these precautions it will never rot. Laid upon a platform of cane and ventilated from all sides, it will dry up in time, but not decay.

Effect of rain—commercial questions.

The effect of rain upon the trees and fruit during the months when rain is to be expected here, (July to 15th of October) is beneficial, clearing the leaf and giving it respiration; but what the result further north would be of the cold storms upon the stem, the leaf and the blossom, I leave for others to determine. We have in this country, however, (years apart) during the season of rain, *chubascos*—hurricanes of wind and rain—which precipitate all the frit to the ground and make sad havoc with the trees.

Oranges are worth here, piled under the trees, $3 50 per thousand; and packed in crates, with expense of freight to the beach and placed on board, about $5 per thousand. But, as very little attention is given to the delicate handling of this juicy fruit or to wrapping in paper or packing in boxes, the loss from rotting is a large percentage; so that after paying freight to San Francisco ($5), together with duties and other heavy expenses upon the gross amount shipped, the result is not always encouraging.

Of other tropical productions, such as the pineapple, sugar-cane, cocoanut, date, etc., it is not worth while here to speak. They are not adapted to the climate of Upper California. Cotton, indigo, rice, tobacco and coffee, grow in perfection here. The first two are indigenous.

In conclusion Mr. Gillespie says: "If Lower California were a part of the United States, exempt from heavy duties for exports of this kind to San Francisco, it would be, for all tropical fruits, the garden of California."

Do not suppose for a single moment that your neighbor cannot teach you any thing. The wisest man may sometimes learn a valuable lesson from a fool. The farmer who thinks he knows all there is to be learned will soon find himself considerably behind the times. Agriculture is now a progressive science and its professors and students must be wide awake and stirring.

Political Economy.

The *Southern Farmer*, of Memphis, Tenn., gives expression to the following strong sentiments upon important questions:

There was less corruption in the public service when the pay of Congressmen was small. Now it is ten thousand dollars and perquisites which runs up the compensation very high. And ever since then there has been more or less corruption in our legislation. Unscrupulous politicians now seek office for the pay it promises, and they know beforehand how much they can afford to spend in corrupting suffragists, to obtain the prize. The more pay there is attached to the office, the more corruption funds will be dispensed to obtain office. The main remedy is in a reduction of salaries. Let all legislators, State and National, have no higher wages than are earned by the industrious farmer and mechanic, and the temptation to use corrupt means to obtain office will be at once removed. In this way the honest and patriotic who will not consent to be assessed to pay whisky bills and lying newspapers will be offered some inducements to seek office for the good of the community. Let us have a general reduction of official salaries from Congressmen down in the National, and from Governor down in all the State governments. The great want of the times is honesty and economy in all departments of government.

There is a small minority of the people who are flourishing beyond all precedent. These are the money-lenders who, falsely claiming that money is property, demand unprecedentedly usurious rates for money loans. In this way they grow rich with great rapidity. But the high rates of interest demanded soon produced suspension and demoralized trade, and these a depression in prices unheard of; and now these money-lenderere, who have all along demanded the pound of flesh of the agriculturist, are flourishing off the misfortunes which their own avarice and unwise State legislation have brought upon the great mass of the people. Let us have cheap money rates and thus encourage all branches of useful manufactories, and these will give profitable employment to all, and thus restore a healthy trade and general prosperity.

The people of this country want economy and honests in the administration o government. They want fewer officf holders and smaller salaries for those that are really necessary. They want less expensive State governments, and less taxation. They want less legislation and better laws, more faithfully enforced. They want the State officials, who have been the head-centers of rings adverse to the interests of the people, to take back seats. They want all industrial interests developed, and all educational interests fostered. Let them make known their wants, and demand that an honest effort shall be made to promote them in all legislative halls during this Centennial year.

A California Gem. The California Agriculturist and Live Stock Journal, published at San Jose, Cal., is the neatest agricultural work received at this office. The typographical appearance of this work is superb, and its contents leave nothing to be desired. We have but one fault to find with the Western cotemporary—it is furnished to subscribers for $1 50 a year, a price by no means commensurate with its merits.—*Chicago, Ill., Drovers' Journal.*

Correspondence.

THE FARM.

The Nursery of Patriots, Orators and Statesmen.

BY JOHN D. SCOTT, M. D.

THERE is an old saying that "man makes the city, but God makes the country." Whether it be this divine impress, or the pure, calm quiet of country life that produces the effect, certain it is that the best and brightest intellects that have adorned the annals of history have been born and bred on the smiling plains and amidst the mountain homes of rural life. It may be that peaceful pursuits have a civilizing effect, that the unvarying order of the seasons establishes a similar state in the faculties of the mind, that the care of domestic animals cultivates the best affections and emotions of the heart, and that the quiet undisturbed occupation of the farmer naturally tends to useful meditation. This meditation —this concentration of the mental powers upon various subjects until they have been viewed in every possible light, is only that disciplining of those powers whose successful cultivation is rightly denominated "genius."

"This is not solitude, 'tis but to hold
Converse with Nature's charms and view her stores unrolled."

Books, though useful in their place, are not absolutely necessary to the discipline of the mind. Its faculties existed in all their God-like powers long before a book was ever written. Indeed, books are the evidence and the result of the existence of those powers. What is generally understood by self-made men are those obscure individuals who, never having had the advantages of a collegiate education, often astonish their neighbors and the world by the sudden display of mental capacities not hitherto suspected in them. They have had the same mental discipline that the students of our colleges enjoy from the study of the dead languages, mathematics, philosophy, history, etc., but their minds have been exercised and strengthened on other subjects, and in Nature's schools. Can any one believe that the mind of Patrick Henry was idle while watching his fishing line on the banks of some quiet stream? Was that of Newton inactive when he observed the fall of the traditional apple? Were the mental fires of Demosthenes quenched by the spray as he stood upon the sea shore, coping with the breakers' roar?

That scenery and climate both exercise a modifying influence on the human mind and character, can hardly be doubted when we compare the mountain Switzer with the Italian on the plains below, the Scotch with the Hollander, and the hardy and enterprising Yankee with his American neighbors of the plains of Mexico and the pampas of the La Plata.

But, however much, or however little mankind, like the chameleon, may take his hues from the colorings and circumstances of his surroundings, it is nevertheless true, that a vast number of the great and good men, particularly of our own country, have been the best products of agricultural districts. In saying this, however, let it be understood that we do not disparage the merits of those who have been city-born and risen to distinction amidst, perhaps, greater temptations. Nor would we be understood as ignoring, for a moment, the claims of the thousands who have rushed from the work-shop, the counting-room, the bar, the bench, and even from the sacred desk, at the call of their country, either to the tented field, to defend it, or to the councils of the nation, to sustain it.

This Centennial year our mind naturally reverts to the patriots who founded this nation. And first in importance, if not in time, looms up the venerable form of Washington, who loved Mount Vernon as no man ever loved a spot of earth before. It was always with a sigh of regret that he left it; it was always with a feeling of unutterable joy that he returned to its peaceful shades. Not all the crowns of Europe could have tempted him away; but when the stronger and sterner demands of duty required the sacrifice, he willingly wended his way to the North, to assume command of that feeble and undisciplined body of militia —it could not have been called an army —which had raised its feeble arms in rebellion against the proudest and most powerful empire on earth. And even in the midst of the conflict of arms, and often in the grave councils of peace not less difficult and important, his great spirit would wander away to his beloved Mount Vernon, as seen in his hundreds of letters to his agent. Having been an accomplished surveyor, he drew a map of the estate with mathematical accuracy. On it he traced every road, avenue, walk and cow-path, giving the positions, and even the species, of the trees that lined or overshadowed them. His lawns, meadows, tobacco fields and timbered lands, all had a place on it. With this map before him, in the tented field, in the midst of trying and perilous campaigns, or after victory had perched upon American banners and he had become the honored first President of the Republic, he would calmly sit down and write to his manager the most minute directions in regard to the management of the vast estate. Nothing was forgotten—nothing overlooked. In regard to the comfort and well-being of his servants he was most solicitous. Accompanying the shipments and sales of his crops were always full and explicit orders, down to the minutest particulars for clothing, medicines, dietetics and everything else that could possible contribute to their general welfare. A mind that could thus grasp the destinies of a nation and yet find ample time to care for the lesser, but not less imperative, interests of his dependents on the banks of the Potomac, deserves, as it has received from the world, the epithet GREAT. It is the eagle eye that sweeps the horizon—the eagle wing that braves the storm, but forgets not the helpless eaglets on the craggy hights at home. No wonder that the orators and poets of the world love to dwell upon such a character, for its goodness is unfathomable, and its greatness unmeasurable. The theme is as inexhaustible, practically, as the light and heat of the sun; and Washington's name and writings and deeds will be spoken, quoted and emulated "down to the last recorded syllable of time."

And next comes Thomas Jefferson, who, if, perchance, he may once have loved power and place more than his great Mount Vernon compatriot and co-worker in the cause of human freedom, did not love his own Monticello any the less. From the cares of state and the vituperation of bitter party opponents, he fled to that beautiful and quiet retreat, as the shipwrecked mariner seeks some hospitable roof from the horrors of the storm. With clear and well digested ideas upon government, an incisive style, and a well-marked character, that could not be turned from the right, he was calculated, like many others among our great men, to make warm friends and vindictive enemies. Mr. Jefferson, General Jackson and Henry Clay were, perhaps, the best abused men in America. At one time Jefferson's great heart nearly yielded to despair under the heavy weight of slander and obliquy which the political world rolled upon it. But his masterly intellect neutralized the crushing effect and culminated in that brilliant gem of wisdom, "*error can do no harm as long as reason is left free to combat it.*" At Monticello he spent the quiet evenings of his days in the society of his friends, in the reception and entertainment of the guests of the nation, and in giving his wise counsels to its rulers. Through that inscrutable providence "that shapes our ends," on the fiftieth anniversary of our independence, he and that fearless and able champion of liberty, John Adams, nearly at the same hour, joined "that innumerable caravan" that crosses but once the valley and shadow of death.

Jackson was emphatically one of the most perfect types of the American frontiersman. He was from the country people, and of the country people. Energetic, partaking more or less of the wildness of the primeval forest, his will was like the native oak, unyielding in its strength, and stubborn in its growth. His whole life was one long battle. If he was not fighting the land-grabbers of the West, he was engaged in a hand to hand conflict with the merciless savages of the forest; and if not with these, with the enemies of his country at New Orleans. When elevated for two terms to the chief magistracy of the nation, it would seem that his pugnacity ought to have ceased. But not so. Both of his administrations were hot continuous, and on his part, well-fought battles. But when his vital strength began to decline, and its slanting rays indicated the coming evening of life, shortly to be closed in the shades of night, the war-worn veteran began to think of home. And as a striking instance of human contradiction, so common in every day life, he had strangely named that home the Hermitage—a place of peace, of quietness, and of prayer—the very antipodes of his whole life. However, in the bosom of his family—amidst scenes of friends whose minds yielded to his iron will as the needle to the pole, in the fullness of years and of honors, he died, a sincere Christian, wept by his friends and forgiven by his enemies.

"De mortuis, nil, nisi bonum."

The great orator and statesman, Henry Clay, "the mill-boy of the Slashes," throughout a long, active and brilliant life, never forgot his obligations to the farm. Agriculture, no less than manufactures, owes a deep debt of gratitude to his eloquent efforts in its behalf both in and out of Congress. His was among the first voices raised in favor of fine stock, and that of Virginia and Kentucky to-day attests the wisdom of his foresight and the value of his example. He was, too, the father of the turnpike system, which was itself but the fore-runner of the rail and the iron horse. And his voice was ever heard in Congress in effective appeals for the improvement of the western rivers, in order that the country might be opened up to travel and settlement, and that the farmers might be able to transport their produce to market at the least possible cost of money and time. After having bestowed his best energies on the country, he, too, sought the shades of farm-life, and retiring to his beloved Ashland, lived like a sage and died like Christian.

Millard Filmore was but a poor, hard-working farm-boy, but he lived to represent his country at the court of St. James, where Queen Victoria pronounced him "the most perfect gentleman she had ever met." From guiding the plow he was at last called to guide the ship of state, and his administration compares favorably with any since the time of Washington. No name, perhaps, in our history so well illustrates the benign and fostering care of our noble institutions, under which the poor and friendless plow-boy may attain the highest station on earth.

"Honor and fame from no condition rise."

Harrison and Taylor were both tillers of the soil—the one a farmer of the West and the other a planter of the South. These may both have had more or less collegiate training, but their principal education was obtained in the forests, amidst the whizzing of arrows and the whistling of bullets. But when they were transplanted from their native soil to the uncongenial region of Washington City, like the old oaks of the forest under similar treatment, they withered and died, but left names for honesty and prowess that will endure as long as the fields of Buena Vista and Tipicanoe.

But if there ever was a legitimate child of the forest and the farm, it was Abraham Lincoln. Born in the midst of Indian wars—the brain of his own father having been pierced by the bullet of a merciless savage,—reared in the forest, where the sunlight never penetrated until with his young but stalwart arms he felled the timber and made it into rails to enclose the hard-earned clearing—what seer, what holy prophet, as he listened the young pioneer's ax as its echoes died away in the interminable fastnesses of the forest, would have dared to predict that the hand that then wielded the ax would some day guide the pen that would alter the industrial system of a nation, and change the destinies of a continent? Aye, who would have dreamed, in his wildest imaginings, that this untutored spectre of the wilderness would rise up and confront the polished Douglass, "the little giant of the West," and in the fierce encounter of logic would parry every thrust and neutralize every blow of the wily and practiced debater? Mr. Douglass himself candidly admitted that he had met a foe worthy of his steel. This political campaign gave "the Rail-splitter" a national reputation, and soon placed him in a position where his knowledge of "splitting" would be of incalculable value to the country in preventing others from "splitting" the Union.

Thus might we go on, adding line to line, and page to page, in the discussion of this interesting subject. We might have gone back to the Pilgrim Fathers, who were farmers in England and farmers after their advent to America. We might have culled other brilliant examples from "the times that tried men's souls"—Ethen Allen, Putnam, Mercer, Greene, Marion, Moultrie, and hundreds of others. Many of the signers of the Declaration were farmers. A large number of our Senators and Reyresentatives in Congress, both in the past and present, have been, and are farmers, and have been and are proud of the name. The same may be said of our Judges, Governors and Legislators. In fact, the farm is the goal of all ambitions, the *ultima thule* of human happiness. It is the natural state of man. It is a business upon which all other business depends. It is the conservator of political virtue. It is the paladium of human freedom, for as long as the farmers of a country remain virtuous and intelligent their liberties cannot be overthrown by any power that can be brought against them.

In this lengthy and, we fear, tiresome article, we have not touched upon a tithe of what might be said. We leave much, very much, to the reflections of our readers. One thought more and we have done.

How were these great and good men produced? Through what subtle training—by what wonderful alchemy—were they brought to the perfection of mind and character in which we behold them? We think these questions can be answered in two words, HOME EDUCATION. Their schools were the fire-sides, and their colleges and universities the sitting rooms of their homes. Their professors and teachers were their fathers and mothers. The first taught them *the practical lessons of life*; the second, *its moral obligations*, and engraved the principles of virtue so deeply upon their hearts that no time or circumstances could efface them! Has there been much of that kind of teaching during the latter half of our first century? We fear not. And if not, may not the negative fact account, in great measure, for the universal and acknowledged want of public and private virtue, honesty and moral principle?

SHALL WE PLOW DEEP?

ED. AGRICULTURIST: I did not promise to write you an article on deep plowing, therefore you will not be disappointed if I do not do it. There seems to be a spirit of inquiry into the reason why, and a desire to prove that deep plowing is what farmers most need to be successful in raising large crops on worn-out land. Mr. Burrell's statement, I think, is good and sound as far as it goes. But he said nothing of the soil to be treated after his style of cultivation, only that it was mountain land. That he regards deep plowing as a played-out hobbie, and he is not willing to admit of any exceptions, even on fine, sandy loam, I think his last step rather long for the times.

The gentleman one from San Jose, in his reply to Mr. Burrell, takes Mr. B. rather roughly by the scalp in his "critique" on Mr. B.'s style of cultivating mountain land. He thinks Mr. B. wants to evade "my facts" in regard to deep plowing. He states that he plowed a field "deeply." Now, Mr., how deep did you plow? Was it six inches, twelve inches, or fourteen inches? Much might depend upon the depth it was plowed. He gets a large crop on the land that was plowed deep, when, on the shallow plowed land, he only gets eight sacks of *potatoes*. It proved his hobby to his satisfaction. He also states that the soil was a fine, sandy loam. I must say that was good land for his hobby. But he does not state that he saw a piece of heavy, clay soil cultivated in the same manner, the same season, and in the same, or adjacent, neighborhood; and that the result of such cultivation on clay soil was the same as on fine, sandy loam. Now, right here is where the trouble all centers in deep or shallow plowing. It is to know what kind of a soil will be benefitted by being deeply plowed, and what kind of a season to plow it deep. The gentleman one mile from San Jose must not think that he can force his "facts" and "hobbies" on all kinds of soil and all kinds of seasons and be successful. There are thousands of farmers who are *sensible* that will tell him it can't be done with profit. What kind of a crop, think you, could have been raised last year on our high, clay soil if it had been plowed twelve inches deep, with the best surface cultivation within our reach? Not having a "hobby," I simply assert, no crop at all. At the same time, on a fine, sandy-loam soil, a good crop could have been expected by the carrying out of the gentleman's "hobby, deep plowing and thorough surface cultivation.

"Mechanic" gives us some wonderful statements of "facts" in regard to deep plowing. But he fails to tell us what kind of soil the facts grew out of, and only a partial statement of facts as to the seasons—whether wet, dry or average. In his concluding remarks he becomes somewhat mixed in his observations. In fact, he don't really know which is the best under all circumstances, but inclines to deep plowing for corn. That is well. Query: If "Mechanic" has farmed it for forty-two years, why call himself "*Mechanic?*"

But, to sum up the question of deep or shallow plowing, I will venture this assertion: No general rule will successfully apply to all kinds of soil. The farmer must consider, first, his soil; second, the season. What is good practice for A may be ruin for B. Farmers can settle the question only by experiments upon the land they work, and by close observations.

In reference to the tap root of the wheat plant, I will say that to call a man a fool does not make him one, and that the gentleman one mile from San Jose may put me down as one of the unpardonable mud sills, for, after forty-eight years of hard work, and some observations, on the farm, I fail to accept the wheat plant as belonging to the tap-root family. Therefore I have concluded to give my evidence in favor of Bro. Burrell's statement of facts. I believe he is sound on the wheat point. Bro. B. has a good subject, and I hope he will mine it "deeply." Yours, truly,

SAMUEL SPUEL.

San Jose, March, 1876.

[The above came too late for last month. We are pleased to see our farmers discussing this question, and hope they will keep good natured over it. Error is something hard to root out of the soil, but truth must stand on it own merits.—ED.]

FRIENDLY APPROVAL.

ED. AGRICULTURIST: The members of the People's Deliberative Association, in token of our thanks to the Editor of the California Agriculturist and Live Stock Journal, submit the following:

We take pleasure in recommending the California Agriculturist to the public as a worthy of patronage for its out-spoken and fearless manner of attacks on monopoly, rings and frauds of every character; and we regret that other journals will not do as much for the common good of the country. May the spirit of this paper be felt in the capitals of both State and Nation.

JOHN FORTNEY, Secretary.

Paso Robles, March 24, 1876.

REPORT OF THE COMMITTEE ON LAND MONOPOLY.

To the People's Deliberative Association:

We, your committee, submit the following report, and request its publication in the California Agriculturist:

WHEREAS, the people of the State of California have suffered from the unsettled condition of land titles, and all appeals to law have proved fatal to the settlers, and intimidating to other wishing to settle; and,

WHEREAS, President U. S. Grant of the United States, and the United States Attorney-General and the Secretary of the Interior, having set on foot a move to settle all land titles, which we believe will greatly advance the farming interests of California, and throw open millions of acres to actual settlers heretofore held by frauds, which frauds have robbed the Government of millions of dollars for which said frauds ought to pay heavy rents to the Government;

Resolved, That no bill has heretofore been recommended to the Congress of the United States so vital to good government as the settlement of land titles in California; and,

2d—That we extend our prayers to the great Ruler of the universe that He may endow our President with a competency of wisdom to execute his noble move and meet out justice to all parties; and,

3d—That it is the duty of every lover of liberty to sustain the President in this move, and as Washington was called "defender," so may we have full reason to call U. S. Grant DELIVERER of our State.

J. M. STONE,
D. G. WRIGHT,
Committee.

JOHN FORTNEY, Secretary.

Paso Robles, March 20, 1876.

TOKEN OF RESPECT.

[Published by request of the Committee.]

ESTRELLA SCHOOL DISTRICT, San Luis Obispo Co., Feb. 29, 1876.

We, as a committee in behalf of the patrons of this school, extend our most humble thanks to Miss Adella Madden, of San Jose, as a teacher, and for the kindness she has shown her students, the manner in which she has conducted her school, and her unlimited efforts in imparting knowledge to her pupils. We very much regret the closing of her school. Hoping prosperity will go with her, we freely recommend her as a teacher worthy of her high calling.

J. M. STONE,
D. G. WRIGHT,
WALTER GRAHAM,
JOHN FORTNEY,
Com.

Farm Laborers Here and Elsewhere.

It may be a matter of interest to some of our readers to know that, according to the last census, there are in this country 188,000,000 acres in improved farms, and 5,922,000 agricultural laborers; which gives about 31 acres to each laborer. California, in 1870, had 3,600,000 acres of cultivated land, and 48,000 agricultural laborers, an average 75 acres to the laborer. In England there are about 15 acres to each agricultural laborer, and in France 5½. In general terms, we may say, therefore, that one agricultural laborer works as much land in California as three do in the Atlantic States, five in England or twelve in France. This is a showing which may lead some Californians to boast of their State; but when we remember that the careful cultivation to which the lands of England and France are subjected, keeps the land as good as ever, while the lands of California are being constantly skinned and made poorer by a prodigal waste of the resources of the soil, we are inclined to think that it would be better for California if it had more agricultural laborers to the acre and had more labor and fertilizers put upon its soil. The fact cannot be denied that a great deal of the land in California is being rapidly worn out by a bad system of farming, and that the grandsons of some of the present tillers of the soil will have hard work to get a living on the ancestral acres, and will want to "go West," or give up farming.—*Napa Register.*

GOING TO THE SHOW.

We have always had a weakness—if weakness it is—for witnessing the wonderful maneuvers of good circus performers, and for seeing the wild and trained animals constituting a first-class menagerie. Man, the superior animal, exhibiting his animal powers and training, may be deemed by some to be below such as exhibit man's mental and moral qualities, ideas and sentiments. But while a sound physical body is essential to man's comfort and happiness and fullest development intellectually as well, an exhibit of physical training in a high degree, must be interesting to every student of mankind as well as to the mere lovers of sport. While we have always enjoyed the jollity and fun-provoking part of such performances, and have drawn quicker breaths at startling and amazing feats, we have also enjoyed the study in its more serious significance. And whatever others may think or preach we have never regretted either the time or money spent in witnessing such scenes.

As to an exhibit of animals, it is, or should be, as much a study as a matter of curiosity. The boy or girl who visits a menagerie should be given an illustrated book of animal natural history, and also a geography, and be encouraged to commit to memory the natures and habits of the various living things seen, and the country and natural characteristics of the country they inhabit. Who would not like to know what sorts of beings inhabit the planets? And yet how many will say it is silly to attend a show where many beings that inhabit our own planet, the earth, can be seen.

This train of thought has been suggested by the fact that the greatest show of animals and the finest circus ever upon this coast, viz., Montgomery Queen's is now making the tour of the State. If we did not approve of going to see such shows we should not encourage it.

The Model Farm.

As the large ranches are splitting up into smaller and better cultivated farms, the competition in size is exchanged for emulation in thoroughness. The very idea of what is called a "model farm," probably never entered the head of a Mexican ranch owner. How many miles could be ridden over without passing one's own boundaries, seems still to be more a matter of pride with some, than the less imposing, but more effective merits of order, thrift and comfort. The agricultural editor of the New York *Times* has, we think, hit the mark in a recent description of, and plea for model farming, and we can not do better than to give place to his remarks on the premium system:

It is unfortunate that the local, as well as the State, agricultural associations almost altogether ignore the cultivation of the soil in their competition for premiums. As the success of agriculture depends in a much greater degree upon the excellence of cultivation of the farms, than upon the size or beauty of the stock raised upon them, it would seem to be more conducive to the attainment of the ends for which these associations are supposed to have been instituted, that they should attract attention to this especial feature by offering premiums for the best ploughed field, the best crops, the best cultivated, best managed and best kept farm, as well as for the best horse, cow, hog, or trio of poultry.

☞ If you intend to do any mean thing wait till to-morrow. If you are to do a noble thing, do it now.

Household Reading.

MULTUM IN PARVO.

BY MRS. D. C. OUNN.

As strange as it may at first seem, there is no truer saying than this wise old Latin proverb, which, translated, means "much in little." A truth which is wonderfully illustrated by the workings of nature.

The little stream running by our door, tangling the sunbeams, laughing in glorious gleams, is but a drop compared with the grand old ocean, and yet the larger body of water could not exist without the smaller one.

The tiny seed sown by the farmer produces vast fields of golden corn and waving wheat.

The diamond is very small, and yet what beauty and brilliance flash from its crystal depths!

It is only after examining the little flowers filling the earth with beauty and fragrance, and noticing the delicacy of tinting that causes the rose to blush and the lily to whiten, that we realize that man could not create and sustain one of these little beauties.

History, as well as every day's experience, proves that many wonderful discoveries and important results have been brought about by humble means, showing that even in *little* there may be much. Sir Isaac Newton, lying listlessly in his garden, dreamingly looking up into the blue sky, is attracted by the falling of an apple, and anon he gives to the world the laws of earth's attraction or gravitation.

The simple fact of steam pouring from a kettle over the fire awakened thought and research, and to-day we have the mighty steam engine starting the echoes in the silent, sombre forests, or thundering along vast plains and valleys.

"To do and dare" to accomplish some grand and noble result seems to us many times well worth a life of struggle. So considering, we think there lies no glory in the quiet routine of every day life, nor honor in the well doing of humble tasks, and yet it requires more perseverance, greater diligence, for the accomplishment of these than of acts that are seemingly grander. It needs greater strength of character, more of true human principle, to bear patiently the petty annoyances, the little ills of life, than to undergo some great trouble or sorrow.

A smile, a kind word, a sympathizing tear, are little things in themselves, and cost us nothing, yet by them how many a desponding and weary heart has been gladdened and sent on its way rejoicing.

It was only a thoughtless jest, an angry answer, but it turned the soul of a fellow creature from the ways of pleasantness and peace into the dark, fathomless river of sin and wretchedness.

The artless questioning, or simple prattle of a child will often lead upward and onward one upon whom strong and forcible reasoning and earnest appeal have had no effect.

Many a man has been saved from ruin by the remembrance of a little prayer lisped nightly at a mother's side.

A tiny shoe, a golden curl, a withered rose, are each and all little things in themselves, and yet what dear, precious memories they may awaken; and how carefully do we treasure them if worn by loved and lost ones!

In the recollections of a friend it is not the greatest acts, the wisest sayings, that are to us the dearest; but the *little* deeds of kindness, the *little* words of love, spoken, perhaps, falteringly, from full hearts. Thus we learn that—

"Life is made of smallest fragments—
Shade and sunshine, work and play;
So may we, with greatest profit,
Learn a little every day."

REFORM UNDER CLOTHING.

BY ONE OF THE MOTHERS.

DEAR EDITOR: A March number of the *Rural Press* contains an excellent article from the pen of "Sister Colby" describing the combination suit for underwear invented by Mrs. C. C. Curtis, of 606 Montgomery street, San Francisco—the same that may be seen advertised in the AGRICULTURIST, which every housekeeper should read.

It has been my aim, ever since I became the mother of girls, to plan out and clothe them without the endless array of garments usually thought necessary, so that they might dress themselves in the morning as speedily as their brothers. Until the garment in question came under my observation, I never found any which combined everything necessary for comfort and convenience. Warmth equally distributed from neck to heels, looseness, with no strictures to keep the arms from being lifted over the head or the chest from expanding to the utmost. Surely Mrs. C. is a public benefactor, and I am happy to know that she is daily in receipt of orders for patterns, which argues strongly in favor of setting forth the desire among thoughtful ones for emancipation from prevailing customs. I am sure that any sensible woman would feel thankful to be emancipated from the uncomfortable styles of under-clothing, so constraining to breath and movements, that our mothers have handed down, even if they do not break through the fashion of exterior dress. And if American women were brave enough to adapt their outer garments to their needs without being severely criticised, there would be one less barrier to health, since those who have tried it declare that the prevailing mode of dress is a great hindrance to locomotion, whether indoors or out, ascending stairs, or stepping over pavements. The walking costume of some years back, when the skirt needed no lifting, was universally admired and thoroughly appreciated by the fair wearers themselves; still it was permitted to pass out of style. Such a dress, with flat trimmings instead of the flounces and knife-pleatings now so popular, is recommended for a home dress for those having active household duties to perform.

At the sea side, where sea-bathing is one of the summer pleasures, the custom prevails of wearing the bathing dress on picnic excursions or to camping parties. Nothing can be more suitable than the loose blouse, confined at the waist with a leather belt or sash, and pants of the same material, closely fastened at the ankle over a neatly-fitting boot. A long skirt is often worn over this costume, in going and coming, to avoid being conspicuous, as well as for warmth. The fatigue of walking is very much lessened by wearing a single skirt, and that so short as to be not a hindrance, as all admit who have ever tried it; but then it is so ungraceful, and trailing skirts, falling in folds, are so becoming to lovely womanhood—"even though," says the health reformer, "they entail untold misery upon coming generations."

[We append an extract from Mrs. Carrie A. Colby's article above referred to.—ED.]

EMANCIPATED.

I am the happy owner of two new dress reform suits, and am, this moment, blessing the clever originator, Mrs. C. C. Curtis, of San Francisco, and if anybody will procure patterns, sit down and make one suit, put it on, and not spoil the effect by tight corsets and heavy skirts, I will guarantee that she will trip about, mentally exclaiming, at least, as I did, "Emancipated!" "Eureka!" or anything else that will express the sense of lightness and comfort that, to me, was an altogether new and grateful experience.

I had before worn some half-way hygienic garments, but here were three in one, waist, chemise and drawers, cut to measure, neat-fitting and altogether elegant, such as the most fastidious might not despise. A full suit of flannel first covers the body from neck to heels, and over it is a cotton garment that perfectly fulfills the requirements of the three before mentioned.

This will be appreciated, first in wearing, being quickly put on, and oh, so comfortable; next, in the laundry, whether at home or away in the hands of the "heathen Chinee," and lastly, in making; for although tucks, ruffles and puffs may be added, the design of the garment doesn't invite them.

I remember that "Mary Mountain" made certain strictures in the matter of having this artile of dress in one piece, but the objection doesn't obtain here, because, good friends, (sub rosa), we don't have *floas* in Butte county.

And now having taken myself out of the way as a stumbling block to my neighbors and friends by my good example, having tested the patterns and experienced, in part, the benefit arising from them, I am free to maintain that every woman who reads this is not guiltless if she neglects to avail herself of the opportunity now afforded her of obtaining cheap and excellent patterns of healthful undergarments (unless she already wears those equally good), and thus saves to herself and friends the remnant of health that the present style of under-wear has left to her.

Mrs. Curtis recommends that the outside garment be made of Canton flannel, or twilled cotton, so that it may the better pay for making, and as I stitched "seam, gusset and band," I found myself wondering if it wouldn't be in one respect at least, like the "one-hoss shay," not indeed that it was likely to last "a hundred years to a day," but the inventor had make it "so like in every part,"

"There wasn't a chance for a stitch to start."

So that after good old-fashioned wear it will fall to pieces in a heap or mound.

"All at once and nothing first,
Just as bubbles do when they burst."

I remember that a sister inquired, during the Matrons' meeting at the State Grange, as we pored over the hygienic dolls' garments, (which were those I have been describing in miniature) what we should do with our present stock of underwear. I didn't quite know then, but having found out what I shall do with mine, I give you the benefit of my wisdom. My very best I shall preserve to be exhibited at the Centennial exhibition, 1976, as a relic of the dark ages, which they almost begin to seem already; the rest I shall keep for emergencies, and by all means never make any more.

I must not forget that I wanted especially to say, that perhaps the reason many have not already adopted this new fashioned underwear, is because they were unable to learn where the patterns could be obtained.

It would be funny to relate my experience on this score, and if I hadn't thereby realized that others might profit by it, I should hardly have written this sketch at all.

In the varied and absorbing matters that drew our attention at the State Grange, I failed to secure the address of Mrs. Curtis, consequently, when I got settled down at home again, and desired to use the patterns I had so much admired, I was obliged to first lay Sister Dewey under contribution for the needed information. Sister Carr was next interrogated as being headquarters, in a certain sense—being the exhibitor of the doll at the Grange. There being several Mrs. Curtises, the right one was at last found, when it turned out that a certain Mrs. Dr. C. had charge of the patterns; but on applying to her we were once more referred back to Mrs. Curtis aforesaid, for patterns of the required size.

It did seem a good deal like "red tape" didn't it? or Dickens' "how *not* to do it," but it really wasn't, at all; and at last the coveted package came by mail, with a note from the inventor saying she had been obliged to project the patterns upon an entirely new scale. Could it be that I had made a mistake in one of the measurement? Yes, surely, in giving the hight in inches I had represented it to be about eight feet. Here was a figure to make the gravest of our ancestors smile. Eight feet tall and 24 inches around the waist! We had a good laugh as the ridiculous picture appeared and reappeared before our excited imagination, and wondered if Mrs. C. didn't think some of the children of Ank had become "matarialized" up here in Butte county. So here follows the kernel of the nut that has required so much cracking, to wit: the full address of Mrs. Curtis and measurements required in sending for patterns:

"Mrs. C. C. Curtis & Co., No. 606 Montgomery street, San Francisco, room 31.

"The first measurement should be from the highest point on the shoulder seam to just below the knee cap; second, the size around the bust; third, around the waist; fourth, length of waist under the arm; and fifth, length of drawers on the inside seam to just below the knee." Price of pattern for flannel, 25 cents; for cotton ditto, 35 cents, and 15 cents postage if sent by mail.

Now good friends, lovers of humanity and reform, won't you all give these patterns a fair trial and test the virtue of a "sure enough" dress-reform garment.

[Mrs. Curtis is now making three different patterns of under clothing, viz: the "Combination Suit," three pieces, 25 cents; "Excelsior," six pieces, 35 cents, and "Close-fitting," ten pieces, 40 cents. Ladies near San Jose can see samples of underclothing and patterns by calling upon the wife of the editor of this journal.]

GRANDFATHER'S LETTERS---NO. 8.

INGLEWOOD'S REPLY TO AUNT MARY.

Dear Aunt Mary: Your very courteous, candid answer to my last letter encourages me to further open my mind to you on that subject my heart dwells upon so much. Between us there seems great union of sentiment, and I think the soul affinities to which you allude will be found to be as compatible as are the physical. True, we know little enough what the soul is, separate and distinct from the body. That it continues to exist, I do not doubt, so do not be afraid of ever finding me a mere materialist. We find a vast difference in the conditions of people in this world, and who knows but there may be as great a difference in the next? As in this world, what is really essential to our well being de-

pends very much, or mainly, upon our selves, on a parity of reasoning, may we not expect it to be so in the other?

As I told you before my pleasures are not in the club-room or ostentatious show, so I will tell you now in what they do consist. First, and primary, in the successful prosecution of that business by which we live. Though this belongs to the physical, its success is equally important for the soul's well-being—indeed, for the whole man. Then, next in importance, I deem a polite, kindly courteousness of demeanor and manner when I come into the house, making a special effort to leave trouble and vexation behind, till an opportune time arrives to give expression to these things. The cultivation of a taste for certain things I deem important, not physical tastes, but intellectual, soul tastes; and what a vast range for its exercise! In the book department, a taste for history, biography, science, religion, theology, and the general knowledge to be attained only through reading. Oh! how I wonder at the young finding time to spend over a billiard table. Then, again, I do love to have and cultivate a taste for those beauties of nature we often see surrounding the porch and garden; also, those other beauties of art that are made to decorate the interior. Why, in some houses we go into, beauty covers the walls, and nothing but beauty emanates from the lips in the shape of polite, courteous language, in having something to say, for these tastes and their cultivation promote our conversational powers. They give us something to think and talk about. But what food does an evening spent over a billiard or card table give us for thought and conversation? Not our very nature has a craving for society, from earliest childhood to old age, and if denied or restrained from that which is ennobling and elevating, it is apt to have recourse to the contrary—that which is debasing. And why cannot we have more houses and families of the higher type upon which my mind's eye now rests? We could, I think, by timely care and cultivation. For such I am an advocate. Who will come to my assistance? Will the darling Augie?

Such, dear Aunt Mary, are my soul's cravings and desires. This and the words of a former letter will include the physical, the intellectual, moral and spiritual. Congenial, suitable exercise in all these departments of our nature, and in congenial, suitable companionship; and who will not say there is a possibility of a little heaven here below.

One word of that masculine supremacy to which your letter refers. It is to the husband's home and business, style and mode of life the wife always comes, hence *he* only is competent to judge how far he may deviate from that course. But never fear, Aunt Mary, as long as the love principle is kept all right on both sides; that is the great compensating regulator in domesticity.

P. S.—Dear Aunt Mary, you perceive the confidence I place in you. May I hope, through your mediumship, to make a favorable impression on the heart of dear ma and the beloved Angie?

Your true friend, INGLEWOOD.

LETTER FROM MOUNTAIN HOME

BY AUNT PEGGY.

Twenty miles in the mountains, one thousand feet above the ocean, mountains of the north, south, east and west sides, in the basin, is one of the finest and loveliest little mountain-valley homes that can be found in the State—a place that literally flows with milk and honey. Here lives your friend.

Many have asked the question, "How do you content yourself, and pass away the time, so far away from neighbors and society? I should die with the horrors." I answer them, that I have my children to care for, my household duties, my family sewing, honey bees, home dairy, fruits of all kinds, plants and flowers, and my little chickens, and little kids that are orphans, and a great many things that are too numerous to mention, and last of all, "there is no place like home!"

This is Saturday afternoon. The week's work is finished, children dressed, faces washed, etc., and as I feel that I would like to sit down and rest until time for tea, I take up the last number of the CALIFORNIA AGRICULTURIST, read over the communications, familiar talks, letters from boys and girls, and it almost seems as though I was reading letters from far away friends. I am glad to see our boys and girls take so much interest in trying to make the paper more interesting. I think the Editor very generous in giving you a "Corner" for your little mite. And I think when we have such a sociable and valuable paper within our grasp, it is the duty of every subscriber to do all they can to keep it up and make it interesting for both old and young.

I have been pressing ferns and flowers, and so successfully that I really feel proud, and will tell you how I dry them so that they will retain their natural colors. I take a box, any size (not too large, of course), cover the bottom with fine, dry sand, put in a layer of flowers and a layer of sand, alternately, until the box is full; then let them remain until I think they are dry enough; then take them out and spread before putting them in books. I hope whoever may try this will be as successful as I have been.

PASSIONS.

A SCHOOL COMPOSITION, BY MAMIE.

To subdue the passions of creatures who are all passion is impossible. And what are these passions which make such havoc? If you permit your passions to govern you, instead of your governing them, you destroy your vital powers. A wise man governs his passions; but a fool permits his passions to govern him. The passions are modifications of self-love. The preservation of man is the center toward which all his affections and all his actions converge; he inclines strongly toward pleasure, and he avoids everything that can injure him. Pleasure and pain are the elements of all the passions, which may be reduced to love and hatred. Pleasure is only momentary. We judge of it by its intensity. Its duration establishes happiness. The greater the pleasure a person experiences, the greater the apprehensions which he has of being deprived of it. The mind is immortal, and full of undying thoughts and conceptions. The stream, when it descends slowly with a hoarse murmur from the mountain, ripples through the plains and adorns and enriches the scene; but when it rushes down in a roaring, impetuous torrent, overflowing its banks, it carries devastation and ruin in its course. So, when the passions, appetites and desires are kept under due restraint, they are useful and fulfill the intentions of a wise and overruling Providence in performing a part of our nature; but when they are allowed to rage with unbridled fury, they commit fearful ravages on the character which they were fitted to adorn and exalt. If we wish the stream of life to be pure, we must preserve the fountain from whence it flows unpolluted. And to enjoy health and long life, the passions should be kept under due control; for they may be considered the moral thermometer that regulates the system and holds the most powerful influence over the general health and welfare. Our passions, when controlled, are the genial warmth that cheers us along the way of life; ungoverned, they are consuming fires.

San Jose Institute, April, 1867.

IMPROVE THE COUNTRY HOME.

BY A FARMER'S WIFE.

Why are our young people so ready to leave the country home and seek a livelihood in the city or town? Is it not because science and art and civilization are there most rapidly developing, and amusements and entertainments are more enticing? Those of our young people who can be spared from the farm to enter these marts of education are seldom induced to come back and lead that blind, dull, monotonous life in which we country people are plodding. Then I say we must *educate for the farm*. We must bring more science, art and literature into our homes—take and read more good books and papers. Let the genius of intelligence shine in the kitchen and embellish our lives.

The little country girl of eight or ten summers, by a simplified form of botany, can be made to see much more beauty in the lovely wild boquet she gathers than she does to-day; and the middle-aged, or hoary-headed man need not plod along in uncertainty from ten to twenty years on his farm before he knows to what kind of growth his soil is adapted, but he may, by the science of chemistry and practical experimenting, unfold the nature of the soil and plant and cultivate rightly that which is adapted to its conditions. Then will there be inducements on the farm for the young man and for the young woman. Harvest will yield more abundantly with less labor. We will not hear the continued cry, "it don't pay," when knowledge takes the place of ignorance in our labors. There will be more recreation for all, more home embellishments, and our young people will not look like old men and women before they are mature.

There are many helpers at work to bring about this result for the laboring agriculturists, and the best thing the farmer can do is to resolve to progress and make his farm home more attractive and himself more intelligent. Remain organized as you are in the Grange, I would say to every farmer, and by co-operation help to "paddle your own canoe." You cannot reach a more ready road to mind improvement than to patronize the best periodicals, and jot down your daily thoughts upon the many, many subjects about you. It may come a little hard at first, but it will grow easier each time, and will be greatly to your benefit.

EVENINGS AT HOME.

BY HOUSE-KEEPER.

It is one duty of parents to devise means for making the evenings in our country homes pleasant and profitable for our children. If they find enjoyment at home they will not be so much inclined to seek it elsewhere. Of course, when we live several miles from town, we have not the opportunity of attending lectures and other entertainments which we as well as our children could enjoy. Therefore we must look for other means of entertainment.

One very pleasant way of spending an evening is by reading aloud. Let each person present read a short article. The children can select from books suited to their age and capacity. This practice will be found of great assistance in making the reading enjoyable as well as beneficial to the entire household.

There are many games which are very pleasant, among them, chess, checkers, and backgammon; also, many games of cards, among them the popular game of authors, which is very interesting and instructive as it makes us familiar with some of the names and works of prominent authors. All of these games are not only harmless, if properly indulged in at home, but are useful in cultivating the memory and disciplining the mind, but principally in affording such amusement at home as will keep the young folks from wanting to go elsewhere.

There are very many ways in which instruction and amusement may be combined in spending our evenings at home in the country.

A MID-NIGHT RIDE.

BY "JOE."

I was in a very new mining district. The reputed richness of the mines had attracted a large number of prospectors, and with the rush came the "slum" of followers that are almost inseparable from such excitements. Our mine was the only one fairly at work, and the only one whose mill was in operation. Other mills were in course of construction, and the reputation of the assays in San Francisco of our rock had made this—the first run of our mill—a subject of universal interest in the district. The clean-up was made on Saturday, and big reports had leaked out of its grand result. It was only a week's run, and the mill was a single battery, with limited conveniences outside of the battery for amalgamation, etc., bearing about the same relation to the present style of quartz mill as a jewsharp to a piano. However, It was a big thing for our district, and the run had been watched and commented upon and the result prophesied was one calculated to throw Washoe (which was then the generic term for the Nevada Territory mines) quite into the shade.

Of course it was desirable to get the result of this first run to San Francisco as soon as possible, and, as the condition of things was a little shaky as to the security of the road, etc., it was a serious question how to solve the problem.

A military express was running from a neighboring United States Indian post, and the arrangements were made to have the yellow bullion carried by their "vidette" to the nearest express office: but the post was some twelve miles distant from the mine, and a dangerous road lay between it and our mill.

Tempted by the madcap ride, I offered my services to carry the bullion through by night to the post. The superintendent of the company eagerly accepted the offer, and sober second thought found me saddled with an errand which threatened a little personal danger and a good deal of personal discomfort. However, I wouldn't back out, nor show my misgivings; so, about midnight, I set out on my lonely ride, mounted on a white horse well known in the district, with saddle-bags carefully secured and filled with the bullion, and a Colt's dragoon pistol in the holster. I felt the excitement that a spice of danger always gives to such undertakings.

After crossing a ferry at the start of

the journey, the road lay through a long stretch of plain dotted by sage-brush and grease-wood and crossed by two streams, on the margins of which cotton-wood tried to grow, and succeeded so far as to make the roadside quite like chapparel.

All was quiet, save the sound of my horse's feet as he went off on a round trot, until after crossing the first creek.

Soon after getting out of the thicket which the stream encouraged to grow, I heard the sound of another horse following rapidly. To say I was thoroughly alarmed, is probably a mild way to put it. However, I concluded to make it a question of speed, and striking my spurs into old "Whitey," we commenced our race.

"This chap," I thought, "intends to come up with me, if possible, at the next creek, where the undergrowth is thicker, and I must beat him there." So I urged my horse to his utmost speed.

Away we flew through the gloom; but the sound of the pursuer come nearer. No use to look behind. I could only see some fifteen feet about me, and that but indistinctly.

On I went—the perspiration dropping from my forehead, and on patting my horse's neck (urging him in a low voice) I found he, too, was feeling the pace.

Still the pursuer gained. From the break-neck pace at which we were going, there could be no doubt of his intentions.

The line of shrubbery of the second creek could now be seen dimly through the darkness, and almost immediately the stream was reached. Through I dashed—a gleam of hope that my pursuer would stop, making me feel a little elated.

On regaining the hard road once more, I heard my pursuer nearer than before. I was doomed, I thought; but I was going to make an effort for it, even yet. I loosened the saddle-bags and grasped my pistol. The pursuer was close behind. Throwing a glance backward, I could distinguish his dim outline merely closing up the gap between us, his horse breathing heavily. Kicking my feet from the stirrups, I swerved sharply from the road, dashed into the sage-brush, and pulled up, ready to leap from my horse with my saddle-bags, and giving him a blow, send him off riderless, hoping to deceive my pursuer into the belief that I was still upon him.

As I cleared the road my pursuer flew by, unable to turn as quickly as I had done, and you may imagine my feelings when I found it was—*a riderless horse!*

It seems some of the horses of the company of cavalry stationed above had got loose, and they were so used to the drill of the camp that, while loose in pasture, they would often join in the mount-drill, and I suppose this fellow was just amusing himself by "following suit."

I got over my scare, but never told before this adventure of my "midnight ride."

Jesse D. Carr, of Salinas City, recently lost his fine young bull, "Sixth Lord of Oxford," which has been known throughout the State as the finest blooded bull in the country. He has taken the first prize at every fair he has been exhibited at, and arrangements had been made to the Centennial this summer for exhibition. Mr. Carr has been offered on several occasions $12,000 for the animal.

The religion which is to save the world will not put all the big strawberries on the top, and all the small ones at the bottom.—*Ex.*

Stock Breeder.

MODERN CATTLE FARMING VS. THE ONE-CROP SYSTEM.

BY COL. COLEMAN YOUNGER.

THE following paper was prepared by Col. Younger to be read before the California Short-horn Cattle Breeders' Association:

It is held by the most experienced farmers in the older States that breeding of Short-horns, or grading up our common cattle in connection with farming is the most profitable farming.

I propose to discuss the latter proposition at some length. In some portions of this State farmers are beginning to realize the fact that to cultivate our virgin soil from year to year in wheat or barley, will ultimately impoverish the land to such an extent that the yield will be below a paying crop.

It is a fact that formerly our best lands would yield from 40 to 60 bushels of wheat per acre, and from 60 to 80 in barley. What is the condition now, after twenty years of continued cropping the same lands in wheat and barley? It is considered good cropping on this same land if it yields from 30 to 40 bushels in wheat and from 30 to 50 in barley per acre. Now, the American people in any other State but this would long since have changed this mode of farming. But our misfortune is that we want to strike a bonanza in every crop we raise, and keep trying, on the same principle from year to year, until our lands are ruined, and we then have to adopt a new mode at a great disadvantage.

In that portion of California where the soil was light from the beginning, after sowing their land in wheat for some years, they found that they would have to adopt a different mode or give up farming.

The practice now is to summer-fallow one-half of their farming lands, and the result is that the one-half produces more than all did under the old process. Now, let us consider for a moment where the profit comes in. Let us suppose the farm to consist of 200 acres, under the old mode; these 200 acres have to be plowed, seeded and harrowed; the reaper will have to go over all the ground. Now, to get at the cost, count up what the seed will cost for 100 acres—plowing, harrowing, reaping and threshing—and you will realize the amount of money lost every year. But, under the new mode, all this is saved, except the summer-fallowing. This of itself is a large saving, and should be reckoned as clear gain.

Now, I contend that there is still a more profitable mode of farming, which must be adopted sooner or later, and that is to combine beef-raising with other branches of farming. All farmers ought to and most of them do own a number of common cows. Suppose every farmer would keep as many cows as a third of his cultivating land would keep well, and breed them to a Short-horn bull, what think you would be the result? To come at this we will suppose the farm to be 200 acres; a third of that would be 66⅔ acres, allowing two acres to each cow. Now allow these cows to produce thirty calves, and to suckle the same. Having ample pasture, at twelve months of age they will average in this climate a thousand pounds, of the most delicious and high-priced beeves. These thirty calves will bring at least $1,500. The resting of the land and the droppings are invaluable to the soil—far more so than summer fallowing. I am only estimating one-third of the land in this proposition. It may be said that this number of cows will cost quite a sum of money. It can be truthfully said that the cultivation of the extra hundred acres will dost much more than the cows. In the first case there is but little expense connected with the raising of the calves; the purchase of the bull is the only extra expense. Young Short-horn bulls of superior quality can be bought of reliable breeders in this State at from $150 to $500. If these propositions are true and are practicable, and I think they are, why have not the farmers of California long since adopted this mode of farming?

There was a time in this country when there were good reasons for not adopting this course. But few farms were fenced; the country was full of cheap cattle; they roamed over the plains by thousands, and our people hoped to make a large fortune by some chance speculation and leave the country for their old homes, not realising that this was the best farming and stock country in the habitable globe. The failure of thousands to make fortunes by mining, and not having means to take them out of the country, compelled them to cultivate the soil. This fact has developed the farming resources of California. These hardy pioneers were quick to learn that there was large and quick fortunes to be made in raising wheat and barley, and the owners of large ranches, with their tens of thousands of Spanish cattle, had as good a thing as they wanted to furnish Spanish beeves for the wheat-grower and other non-producers. These cattle kings could not be induced to use Short-horn bulls. They said what they lacked in quality they made up in numbers.

The drouth in 1864 made sad havoc of these cheap cattle. Large ranches, that counted their cattle by the thousands, could no longer count them by the hundreds. After these vast herds were destroyed, the owners of these large ranches were unable to again stock them as before, and of necessity they had to be divided up into small tracts, and sold for farming purposes.

Then the mania for making fortunes in raising wheat continued, and this constant wheat-growing has been tried until some of our largest farmers are involved to an enormous amount. This insane policy of taking such desperate chances from year to year on a single cropping will, if persisted in, bankrupt any farmer. What sense is there in cultivating thousands of acres, and handling hundreds of thousands of dollars every year, only to come out behind four years out five, and ultimately to fail with all your energy? Will sensible farmers from these desperate follow up this ruinous policy, hoping against hope, to make a great fortune on a single crop? Or does it gratify their vanity to see their vast farming operations spoken of in the papers? Is this a compensation for the great losses sustained by many? But few are aware of the great struggle, the anxious moments, the fear of failure, the hope of success that alternate in the minds of these large farmers, when perhaps their all is staked on a single crop. This inward struggle, these inward moments of despair are concealed from the papers and the world, at least for a time.

We are compelled to turn from this class of farmers, for they are joined to their idols, and to discuss the beef question with the small farmer. We are glad to note that a great change has taken place on this coast. In the last few years hundreds of our farmers have adopted the mixed mode of farming. Some have started a small herd of Short-horns and are doing well, but much the larger portion have bought young Short-horn bulls and are grading up their common cattle. As a general proposition, there is more money in this course than the other, for any farmer, I do not care how small his means are, can buy a young Short-horn bull and commence.

There is so much to encourage our farmers to improve their stock, to raise better beef, that I am inclined to think that if Short-horn breeders' experience and practical information were diffused more fully among our farmers of breeding, raising and feeding of Short-horns and grades, it would induce hundreds to add that to their other farming. The great increase of the consumption of beef in America and England in the last twenty years is so marked that there can be no mistake in embarking in the business.

In a few years we will have cheap transportation to the Atlantic States and to England. Then all the beef from Nevada will be shipped East, and we will have California to supply. The great supply for the Eastern market is driven from Texas. When that is exhausted, which must be in a few years, where are the millions to get their supply from?

It is a noticeable fact that Yankee ingenuity is now being taxed to construct vessels, that fresh beef can be shipped to England and to all Europe to feed their millions of hungry inhabitants. Breeders should bear in mind that it is the quality and not the quantity which gives the greatest profit. Prime beef commands ready sale at good prices when inferior beef is a drug in the market.

If our farmers needed encouragement to grade up their common stock, they would get it by visiting the herds of Lux & Miller. These gentlemen have been in the business for more than fifteen years, and they now have the largest and finest herds of Short-horns in this or any other country. Then there is Walsh's estate in Colusa county; Martin, James and Daniel Murphy of Santa Clara county, and Emerson of San Mateo. Across the bay, the Page Brothers, Chapman of San Francisco, Carr of Salinas, who has a large ranch of grades in Oregon. All these gentlemen have fine thoroughbreds. You may say these men are of great wealth, and can afford the outlay. So they are; but I will now mention a few out of the many who are called small farmers who have been in this business for years, and have made it a success. In Santa Clara Valley I find Quinn, Reardon, Clark and Thompson, and there are many others in all portions of the State. To see these herds of grades and learn the amount of money they have realized from them, would give great encouragement to young breeders. To improve our stock and increase their value for feeding the human family, is one of the duties of the Cattle Breeders' Association.

A good reputation in business affairs is of the first importance to any farmer, and especially to a young farmer. A reputation for being a grower of first-class fruit is worth as much, yea more, than the crop itself, if such a comparison is permissible. A farmer noted for growing fine fruit and for putting up nothing but fine fruit for market is always in market at highest rates. Indeed the market seeks him and pays him a bounty for his care and honesty. A good reputation is a good thing. A farmer who grows fine wool and cleanses it in the most thorough manner, and offers nothing but wool, is known among all manufacturers through their agents, and his product is worth a premium. His reputation makes him a market at his door.—*Detroit Tribune.*

Boys and Girls.

Totty's Arithmetic.

One little head, worth its whole weight in gold,
Over and over, a million times told.

Two shining eyes, full of innocent glee,
Brighter than diamonds ever could be.

Three pretty dimples, for fun to slip in,
Two in the cheeks and one in the chin.

Four lily fingers on each baby-hand,
Fit for a princess of sweet Fairy-land.

Five on each hand, if we reckon Tom Thumb,
Standing beside them, so stiff and so glum!

Six pearly teeth just within her red lips,
Over which merriment ripples and trips.

Seven bright ringlets, as yellow as gold,
Seeming the sunshine to gather and hold.

Eight tiny waves running over her hair,
Sunshine and shadow, they love to be there.

Nine precious words that Totty can say,
But she will learn new ones every day.

Ten little chubby, comical toes,
And that is as far as this lesson goes.
—[St. Nicholas.

What Would You Think?

When walking out some summer's day,
What if a little bird should call,
And on your shoulder perch and say,
"Speak well of all, or not at all."
What would you think!

What if you chased and caught for fun
An airy, gaudy butterfly;
And on its wings there in the sun
You plainly saw the words "Don't lie"
What would you think!

What if you watched an opening rose
Spread all its petals to the air,
And to your wondering gaze disclose
Two little warning words, "Don't swear!"
What would you think!

What if you sought to rob the birds,
And hunted for their nests with zeal,
But found each egg traced o'er with words
As plain as print, "Dear boy, don't steal!"
What would you think!
—[Independent.

"OUR CORNER."

DRAW near, children, and listen while Aunt Polly tells you of a sweet child who has passed away from earth — a precious bud snatched away to bloom elewhere. The mother's hands have dressed that little form for the last time, and away out of her sight have they carried her babe, in its flowery bed, away to its silent resting place. She was an only child. The sole object of affection almost idolatrous, of both parents and a wide circle of friends. Less than two years had she dwelt upon earth, yet many of more mature years pass away leaving behind fewer to mourn. Her beauty and winning ways endeared her to all, and never can her place be filled.

Each one of you, little ones, bears the imprint of angelhood. This world would be a dreary place were there no children. But kind, lovely, gentle children are the ones whose presence we all enjoy. Remember to think of others always before yourselves. Try to do something each day to render life happier to those you love. And when restless or impatient, remember the lesson breathed forth in the patient lily of the valley, and fragrance of the hyacinth always scattering joy. Think of the silent form enshrouded in lace, decked with the hyacinth and lily of the valley —emblems of purity— and hold your breath, lest you offend.

A life ended. A mission fulfilled. Our only solace in this trying hour is, that she has passed beyond all suffering, and and we would not call her back to a life so full of trial and disappointment as this life is to many of us. The lesson taught by such bereavements we all must learn, and if, as children, you patiently submit to the will of earthly parents, you will, in time, become submissive to the Higher Will.

And now, my little nephews and nieces, see what a funny story is sent us by our good friend, M. E. T.:

When little Annie was three years old, she went with her papa to witness the ceremony of baptism by immersion. A large and clear stream of water was chosen for the occasion. Annie stood where she could see all that transpired, and as the parties were taken to and from a watery grave, her little face grew thoughtful. On reaching home, she asked mamma why they put the people into the water. Mamma scarcely knew how to answer one so young, so she simply said, "To make them better." Annie was satisfied: what mamma said was always true. On the following day Annie was seen very busily engaged at something about the pool of water where the chickens drank. Papa, on going out, found two tiny kittens, dripping with water, and almost drowned. Knowing how fond and how kind was her usual manner towards her pets, he said, "Why, Annie; would you kill your little kittens?" "O, no, papa, I'm only making them *better* kittens."

Now for our letters.

HOLLISTER, March, 1876.

Aunt Polly: I am eleven years old. I have guessed the enigma; it is O. I have made out Jennie's rebus, too; it is Air. I have formed 54 words from the word "carpets." I will give you a list of them. A. E. POOL.

Glad you have written, and hope to hear from you again. May-be you will beat next time.

And this from amidst the snow-capped Sierras:

SIERRA, April, 1876.

Dear Aunt Polly: I like the little folks' Corner so well that I thought I would write you a few lines, though I am afraid you will not think my letter very interesting. Perhaps you will be surprised to hear from your little niece that lives way up in the mountains, where the snow has been up over the fences this winter. I have been trying how many words I could spell from "carpets," and send you 60. I am eleven years old.

Good-bye. LIZZIE H.

Aunt Polly remembers when she was a little girl, and lived where there is lots of snow in the winter. It was very cold sometimes, but we had splendid fun playing in the soft snow and sliding on the hard, glaring ice, when we went to school. It is just as good for girls to play out of doors as for boys—so Aunt Polly thinks.

Alther Feldman, San Jose, sends the answer to Jennie's rebus and 83 words from "carpets."

ANTIOCH, March, 1876.

Dear Aunt Polly: Noticing a request in the AGRICULTURIST for the young folks to try and find how many different words could be made out of "carpets," I thought I would try, and I succeeded in making 167 words. Yours, truly,

GEO. W. FULLER.

Here is a letter from Lompoc:

Dear Aunt Polly: I am fourteen years old. Do you think I am too old to be a cousin to the little boys and girls that write to you? I see in the last AGRICULTURIST you requested the boys and girls to see how many separate words they could make from the word "carpets," so I thought I would try and see how many I could get. I got 241; all the words I could think of and find in books and papers, and then took the dictionary. I don't know as that was right, but there was nothing said about it, and mother said it would do no hurt, and would teach me to spell. I have made a puzzle which I will send to you, and if you think it good enough, I would like to see any of the cousins make it out.

CHARLEY TUCKER.

Yes, Charley, it is good drill to find the words in the dictionary and learn to spell. You are not too old to be Aunt Polly's nephew. She is glad that you have written, and hopes you will remember to do so again.

Here is Charley's puzzle. How many can guess it?

My first is in paint, but not in ink;
My second is in rose, but not in pink;
My third is in make, but not in wake;
My fourth is in sleep, but not in lake;
My fifth is in see, but not in talk;
My sixth is in run, but not in walk;
My seventh is in stake, but not in log;
My eighth is in snake, but not in frog;
My ninth is in track, but not in trail;
My tenth is in fence, but not in rail;
My whole is a thing which we all should love.

Here is a cross-word enigma sent us by a good friend, and we guess it will puzzle our pets to make it out:

My first is in apple, but not in plum;
My second is in go, but not in come;
My third is sa sister, but not in brother:
My fourth is in mother, also in father;
My fifth is in love, but not in joy;
My whole is loved by every boy.

MOUNTAIN VIEW, April, 1876.

Dear Aunt Polly: I send my list of words from carpets. I have 359 words. I like the AGRICULTURIST very much.

Good-bye. CHARLIE SPRINGER.

Well done, Charlie. You have dusted the "carpets" pretty thoroughly, and have beat for the chromos.

A welcome to our little niece clear away in Ohio:

LA GRANGE, Ohio, April, 1876.

Aunt Polly: My own Aunt takes the AGRICULTURIST, and I have read the letters of the little boys and girls, so I thought I would try. I have a colt named "Dotty Dimple." It is not old enough to ride yet. I have a shepherd dog. His name is "Pluto the Fourth," and he can sit up and cross his paws, walk along on his hind feet, roll over, and do many other tricks. This is all you will want to read, I guess. Please print this letter. From your friend.

ANITA JOHNSON.

Thanks to all who have tried to get all the words they could from "carpets." The question now is, Who is entitled to the pair of chromos, the "Chicks" and "Birds"? Aunt Polly has found out 536 words, which beats all, but then she does not expect to keep the chromos, although she wishes some one else had beat her. It is not impossible to do it. I notice two mistakes in Charlie Tucker's list. He gets "tartar" in twice. Did you ever hear the story about catching a Tartar? Look out, Charlie. The other false word is "parrot." Where did you find your "o," Charlie? But we will not scold you; 239 is not a bad number. You are next to the head, and came near beating, but Charlie Springer's list contains 359 words, and only one mistake. There is no such word as "setas," but probably you meant "setæ,"—the plural of a word used in botany signifying like a bristle. Charlie Springer gets the chromos this time. His is the largest list received up to the 15th of the month, which is the latest moment the Editor will allow Aunt Polly to hand in copy to the printer. But should any other niece or nephew send a larger list, chromos will be sent to them also.

It would occupy so much space to give all the words found in "carpets" that the editor objects giving room for them.

Now what puzzle can we think up that will test the studious powers? O, I have it now: the three boys and girls that will send in the most names of mountains and rivers found in the Pacific States and Territories—west of the Rocky Mountains—shall have, each, a pair of chromos. To give all a chance I will grade the ages. The one under ten years who sends most names shall have a pair; the one under twelve years another pair, and the one under fifteen years another pair. Now, how many will try? Three chances to win and nothing to lose, for you will learn something by trying at any rate. The names shall be printed and due credit given, and Aunt Polly gives to the 10th of June to try in.

GRANDMA'S TALKS.

Easy Lessons from Nature--No. 4.

Good morning, children. Why are you looking so merry, Johnny, while Lucy is half crying and very much annoyed in spite of her span clean dress and pinafore? Does "thereby hang a tale," as the boy said of his kite?

Oh! indeed! Johnny is quite ready to tell how lucy went to draw up the kitchen window shade and unexpectedly sat down in one of the pumpkin pies which Sarah had just got ready for the oven. That accounts for the smiles, but not for the tears. Better a cold pie than a hot one, eh, Lucy? Oh, never mind Johnny's poor jokes. Let him sing all day if he wants to, "Sarah made a pumpkin pie, which Lucy turned to squash." It was a funny accident, and we will turn it to some account by taking our lesson from it to-day.

I fancy, Lucy, that a great deal of that pie changed its place suddenly when you sat down upon it, because there is a law in nature which prevents two bodies from occupying the same place at the same time.

Can either of you tell me of any two things which seem to occupy the very same place at once?

Johnny thinks he can drive a nail into wood without changing the atoms of wood, but let us pull the nail out again and there is a hole the size of the nail, showing that the particles of wood have been jammed out of place just as the pumpkin was jammed out of the plate.

Lucy, dip your finger into the water in this full glass. Doesn't your finger displace some of the water as it goes in? Yes; see how it flows over the top of the glass! It is pushed out of place by your solid finger, and although when you remove your finger the whole is quickly filled up by the atoms of water sliding back into the place, you must believe that the water has lowered in the glass just the size of your finger.

Now, children, we will try a little experiment. We will fill this glass even full of water, and set it on a dry plate so that we may see every drop that runs over. We will take this lump of fine salt, (it is nearly as large round as your finger, Lucy, and dropped into the water in a lump would cause it to overflow) mash it very fine, and then sprinkle it slowly on top of the water, allowing the bubbles of air to escape. There! we have put it all in and the water won't hold any more, I think. Well, now we will take a teaspoonful of this powdered sugar and sprinkle that in slowly, the same way that we did the salt, and yet now the glass seems no nearer to overflowing than at first.

What do you think of that, children? Have we really got three different things in the very same place at the same time? It does seem so, but the truth is that natural philosophers have found out that the atoms of sugar are smaller than those of salt, while the atoms of salt are smaller than water atoms. So that the atoms of water, being larger than either salt or sugar, rest in the tumbler something as these oranges do in this glass dish. See, we can drop these nuts very easily into the spaces between the oranges, as we drop the atoms of salt which partly fill the spaces between the atoms of water. Now we can nearly fill up the spaces between the nuts and oranges with sand, as the atoms of sugar dropped into the spaces left between the atoms of salt. Only our eyes are not fine enough to see all the atoms in nature.

Even air and gases are impenetrable. They occupy their own appropriate space.

I will take this small vial, which contains only air, and try to pour water from the pitcher into. Why does it not fill up? Because the neck of the vial is too small to allow the inside to escape and at the same time so large a stream of water to enter. In order to fill it, I must insert, very loosely, this little funnel, and pour the water through it, allowing the air in the vial to escape outside the neck of the funnel. You perceive, the air and water must politely give way to each other in going through such a narrow passage.

Here is another experiment to show you how real a thing air is. Let us nearly fill this large glass dish with water. On top o, it we will float this little paper boat. We will now turn this tumbler, containing only air, inside-down directly over the little boat, pressing the glass as far down into the water as we can. Look through the sides of the glass dish. The boat seems to be going down, down under the water, floating now on the very bottom of the dish, and not getting wet, either. You understand that the air cannot get out of the tumbler, and will not allow the water to raise in it, so the little boat is really on top of the water yet, although at the bottom of the dish with water on all side of the tumbler.

Do you remember, children, what property of matter we talked about the last time? Oh, yes; Johnny has brought us a text which he heard read in Sabbath-school, where Solomon, the wise king, teaches the indestructibility of matter. You will find it in Ecclesiastes chapter 1, verses 7 and 9. When you read it, remember that the water in the rivers Solomon wrote about in that day runs in our rivers and oceans to-day, and that there is no new thing yet under the sun. To-day we have been learning something of another property belonging to all matter. It is called *Impenetrability*. One body cannot penetrate another body so that both will occupy the same place at the same time.

The prime business of agriculture is to produce desirable plants in a sufficient abundance, of the best quality and with the greatest economy. To do this with the highest success, and with that rational intelligence which is generally supposed to be a distinguishing characteristic of the lords of creation, demands a knowledge of vegetable anatomy and physiology, far more intimate and thorough than has ever been attained.

Eminence is not to be reached by a frantic struggle. The road to it is much more commonplace. He that would dazzle must first dig.

Women.

A Fashionable Lady's Lament.

BY MRS. M. E. WOODFORD.

(After Hood.)

Work, work, work,
But not in hunger and dirt
For I'm not the woman of song ago,
Who sang the song of the shirt.
But I am young and fair,
And I do not work for pelf,
But I'm wearing myself out inch by inch,
Making clothes for myself.
For it's I and and ruffle and puf,
And tuck, and ruffle, and band,
Till I know I am the veriest slave
There is in all the land.

I've no time to read the news,
No time to improve my mind,
No time for those old household ways
To which our mothers inclined.
Click, click, click.
My machine never ready and true,
Though every day working faithfully,
The end comes never in view.
For it's tuck, and ruffle and puf,
Shirring, knife plaiting and band;
Why should I be the greatest slave
There is in all the land?

Oh why am I a slave
To fashion's foolish whim!
Why labor so hard for outward show,
And neglect the pearl within?
"Consider the lilies" fair,
"They neither toil nor spin:"
Oh, who would not be a lily,
And have no ruffles to hem?
For it's tuck, and ruffle and band,
And band, and ruffle and puf.
Of all this foolish flummery,
Oh, when shall we have enough?

Oh, men with sisters dear,
Men with mothers and wives,
How can you stand by so quietly,
While we're working away our lives?
Ye men with vigorous nerves,
Ye men with brave hearts and brains,
Can you not invent a new machine
To make our dresses by steam?
Then with bands, and ruffles, and puffs,
All finished and without flaws,
Then, having nothing else to do,
We'll help you make the laws.

—[Prairie Farmer.

WHO DARE BE FREE?

BY NELL VAN.

"YOU are going to cut of your hair, Susie, did you say? Well, did I ever hear of such a foolish caper?

"And why not, Kate?" asked the wondering girl. "May not I do as I like with my own?"

"Certainly, child, if your mother does not object, but I should think she would know better than to allow you to do such an outrageous thing just as you have grown into young-lady-hood, and ready to go into society."

"Stop, Kate, I do not wish to go into society, except of my own choosing, and as to growing into young-lady-hood, a few years more or less makes no difference if we retain the follies of childhood. I have good reasons for what I am about to do, and if you or any of my friends love me less for mere external appearance, I do not value such friendship."

"Stay, Sue; don't 'get your back up' so readily. Give me one good, substantial reason for cutting off such a luxuriant growth of beautiful golden hair, with just enough wave in it to render the light and shade so bewitching that it enhances even a moderate share of beauty in your form and features."

"Well done, Kate," said the amused Sue. "I never once thought that you admired my foxy, shaggy mane. I shall soon find out how many silent admirers these same locks have had all these years. Fact is, I'm not going to bury the luxuriant growth, etc., out of your sight forever, as I greatly fear its owner may be laid away some of these days, unless something is done now. No, it shall be placed in a frame in a conspicuous place, suitably labeled, if need be, for people to admire. You ask me for a good reason for the clip, and can I give you a better one than that my health suffers daily by the weight and heat of that same 'luxuriant growth?' When I allow it to flow over my shoulders my head is somewhat relieved, but my neck and the upper part of my spine is then unnecessarily heated. Then the snarls to be combed out two or three times a day demand the patience of a Job. Braiding it nown one's back is so unsuitable in one of my years, and besides the weight remains the same. I go for health and comfort every time, Kate, and if I could lay my head in cold water several times a day there would be less burning pain in it, and I should feel better all over."

"But, Sue," said the persistent Kate, "you are not in such ill health as to warrant such a sacrifice. What if you do suffer a little with your head? Don't we all suffer somewhat for appearances' sake? Do you think I could have so trim a figure without wearing my stays a trifle tighter than is comfortable? My French boots, too, would never fit my feet if those same feet were not forced into them and obliged to endure a little pinching. Come now, be sensible for once, and don't disfigure yourself for life by cutting off what you can never replace."

"I will be sensible for once, Kate, and resist your pleadings, since vanity must be held in the balance with comfort, or rather, duty to myself and friends. Never will I admit that mere personal appearance prevented me from obeying the laws of health. You, Kate, may lace in your form, and pinch your feet, all the while imagining that you are improving upon nature, at the same time claiming to be a sensible young lady; I, with no such claim, simply desire to conform to nature's laws. From principle, I neither wear stays nor tight clothing; while shoes that pinch are my utter aversion. Life is for something better than setting traps. Mattie Wheeler told me the other day she could not spoil her market by cutting off her hair, and she, poor girl, fast going into a decline because of her habits of life! That's what I call unreasonableness. If my hair is the only charm I possess, I'll sell out to the highest bidder and take a lower seat. Yes, my mother approves of the step, for she looks up at the noble tree at our side door and says to us: 'You see, my children, how much improved it is by trimming off the superfluous branches. At first we could not be reconciled to the rough handling it received from the gardener, but now at every cut fresh shoots appear, and the young foliage so far surpasses the old that we should no longer murmur. In like manner the inner life is also impaired by need of outer pruning. The vegetable growth upon the head often debilitates and hinders the vigorous, healthy condition of body so essential to the proper development of brain force.' She tells us to live healthfully and we will be spared the suffering caused by broken laws."

"Well, Susie, I'm half inclined to believe there's some truth in what you say, but really the case is different with me. I'm well and hearty. Nothing makes *me* sick. I can stand any amount of heat or cold, fatigue, late hours, late suppers—nothing, in fact, seems to disagree with me; while you whimsical folks, who study out a system of living, are always half sick, and don't live out half your days. You see, I'm always well, have no cough like Mattie Wheeler, and, besides, being in society, one is obliged to conform somewhat to its demands. My mother would never consent to my cutting off my hair, if I wanted to ever so much. Short-haired women and long-haired men are her utter abomination, and she would think I was growing strong-minded at once."

"There, Kate, is just where we differ. I am not afraid of being strong in either mind or body, and, in fact, slightly prefer to be both, rather than the weak-minded, delicate-bodied, doll-like women I see everywhere, both in and out of society."

* * * * * * *

"Who was that sweet-looking girl we just met, Kate?" asked a young Southerner of his friend, as they were promenading Broad street together, a few weeks after the above conversation. Kate was in a most amiable mood, decked out in the latest spring style.

"Do you mean Susie Stanton, with the short hair and loose sack, who bowed as she passed?"

"Is that Miss Susie Stanton, the pet of our Professor? I've heard more remarks made about her than any other young lady since I came here. The young fellows all seem half cracked about her,and would give more for a smile from her than any amount of attention from other girls. Tell me more about her, do. How becomingly she wears her hair, and how modest and unaffected she appears. How is it we never meet her anywhere in society so that a body might make her acquaintance, I wonder."

"If he will ever give me a chance to reply, I will try to enlighted my enthusiastic friend," said Kate, ironically.

"In the first place, she is not a girl you would fancy upon acquaintance. She is admired by the Professor, I am told, on account of her natural figure, unrestrained by the dress-maker's art. Besides, she is extremely shy and reticent; will not go into society because she calls it a waste of time, imagining her health will suffer by late hours, etc.; wears dresses much too short for the style, and shoes too large and clumsy. She even cut off the most beautiful head of golden hair you ever laid eyes upon, in order to ease her aching brain with cold water whenever she liked."

"Cut off her head, did you say, Miss Kate? or only her hair? I am sure I saw a most comely face, fringed with golden hair, like the halo we see about the heads of the Madonna. A peaceful expression she wore, too, as if happy and contented to take life as it comes without the continual anxiety to outshine the next one which is everywhere so marked a peculiarity of the northern girl."

"Ah, you are only teasing me, Ralph. We Northern girls are no different from any others, but Sue is a little tinctured with strong-mindedness, I do believe, apart from her short hair. But she is a simple little thing, and has never come out in society. The young men don't know how she censures their small vices, or they would not be so 'cracked after her' as you call it. If all girls were to keep aloof from young men whom they know to be addicted to habits not considered elegant to those of their own sex, we should have a pretty state of society, truly. For my own part, I like these easy-going, roguish sort of men better than the pious, Sunday-school sort, who make such minnies of themselves in society, falling head-over-ears in love with a girl before discovering whether they have made even a favorable impression."

"To which class, pray, Miss Kate, would you consign me? Will you never have done railing about men and their peculiarities? A wiser way, it seems to me would be to discontinue their attentions altogether, as your friend Susie

does, and obtain their homage from a distance, thus unwittingly lifting them up to a higher standard of perfection in order to become worthy of her smile."

Alas! How many of us live for the true and noble object of life, to improve humanity by an excellent example. Precept is well, but silent practice is better. The maiden shorn of her sunny locks, not only saved her own health and grew rosier every day, but through her example and influence her delicate friend, Mattie Wheeler, had her own hair cut, and by observing other health rules became stronger and better than she had been for years. Three more of her young friends saw the error of their ways. They overcame their parents' scruples, cut off their tresses, and lightened their skirts of superfluous trimmings. Resolving to live for comfort rather than only for outward appearance, they became strong enough to dare to be free. They dressed as they liked, took exercise when and as they liked, and finally determined to find employment for themselves according to each one's peculiar talents. One became an artist, and put her whole soul into her work; another learned type-setting, and became an expert, regardless of the sneers of unprincipled persons. Each choosing to become independent of others for support, and free to select for a life companion only such an one as seemed truly worthy, mentally, morally and physically.

Who can say such lives are failures? Young women, everywhere, be strong enough to dare to be free! Let no flattery prevent you from studying your own comfort and well-being. Health first, *always*. The healthy body is a fit abiding place for a healthy soul, and should seek in a mate one as pure-lived as itself, that perfection of species may, in coming generations, become possible.

TWO IMPORTANT QUESTIONS WITH BUT ONE ANSWER.

Among all classes of people the demand for knowledge, sound, practical information, is increasingly urgent. None are so rich as to be above the *need* of it, and no one is so poor as to not desire it.

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Among the questions bearing upon the social and business interests of all classes, few are more important than those relating to the means of popular education. Two of these questions are, "How shall the over-worked business man secure an acquaintance with the thousands of subjects of general interest which force themselves upon his attention?" and "How shall the poor man supply himself and family with the means of general information?"

Fortunately, these questions have already engaged the earnest thought of able minds, and during the past five years a grand work has been inaugurated and carried forward nearly to completion which is destined to give a practical answer to these questions and prove a mine of intellectual wealth to the people. It is an epitome of universal knowledge, embracing all times, all nations and all matters in science, art and literature of general interest to those who would be well informed. From it the busiest can get accurate information upon topics which, in the ordinary library, are beyond their reach, and, with it in his hand, the poor man has a library of the largest practical value, such as, in other form, he could never own.

The leading educators and scholars of the land have placed this work above every kindred work for the use of professional and business men and as an invaluable source of instruction for the homes of the people, and the following extracts from notices of the work by those who are well known in San Jose, will serve as a sample of the testimony received from critical sources everywhere:

The second volume of Johnson's Universal Cyclopædia has come to hand. It affords me great pleasure to call the attention of my friends to the remarkable value of its scientific articles. The progress of modern science is so rapid, and implements and processes are so multiplied, that the scientific student is often at a loss to obtain accurate information upon such subjects. To such, Johnson is a perfect treasure-trove. Every scientific article is the work of a master in the special field treated of. I have found there very elaborate and beautifully illustrated articles upon many subjects concerning which I had vainly sought in all other accessible works. I should now be very much at a loss if compelled to do the work of my department without the opportunity of reference to Johnson.

H. B. NORTON,
Prof. of Natural Sciences, Normal School.

I have carefully examined the first two volumes of Johnson's Universal Cyclopædia and find the articles ably and concisely written. The information to be derived therefrom is fully up to the present state of scientific knowledge.

The authors have wisely ignored the long-winded and unprofitable theories of the past, and, like sensible and practical men, have confined themselves mainly to facts. Life is too short to be wasted, in this utilitarian age, upon anything else.

I feel satisfied that anyone who purchases the work will never regret the outlay.

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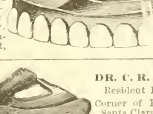

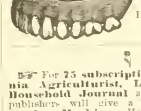

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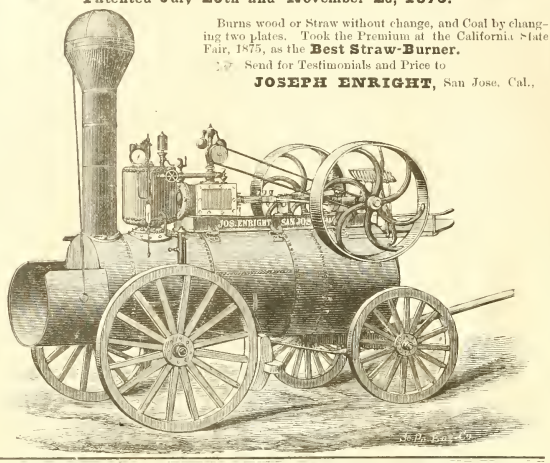

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Balbach's New Brick, cor. Second St. and Fountain Alley,

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VOL. 7 — EUREKA — CALIFORNIA — No. 6

AGRICULTURIST AND LIVE STOCK JOURNAL

A HOUSEHOLD MAGAZINE.

A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

JUNE.

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40 **Acres, Two and a Half Miles West,** rich valley land, at **$80** per acre.

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223 **Acres, Near Cinnabar Hotel, on** Almaden Road, six and a half miles out; a big Bargain for **$12,000**; has a Fine Grove of Timber, House, Barn, Wind-mill, Vineyard, etc.; all valley land but 60 acres. Terms—One-half cash; balance in three years at 8 per cent. per annum.

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By ALEX. P. MURGOTTEN.

One of the Best Family Papers on the Coast

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MATLICK'S CELEBRATED FOLDING STACKER!

FOR THE PURPOSE OF

Handling Grain in the Straw,

Stacking Hay or Straw,

Handling Hay Bales or Other Weights.

This Machine has been extensively introduced in the East, and stands pre-eminently the Stacker for the people. **It defies all competition, and has taken the First Premium** wherever entered. Some of the advantages claimed are: It is simple in construction, easily moved from place to place, and conveniently operated, raising the grain, hay or other weights, and at the same time, and by the same operation, swinging it into the position in which it is to be placed; thence returning promptly to the former position.

It is the Only Folding Derrick Used.

It has Two Movements—Vertical and Lateral.

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The following are only a few of the letters of endorsement received from those who used the Stacker on the Pacific Coast last year:

MR. I. N. MATLICK: Dear Sir—Allow us to say that we have used one of your Stackers, and unhesitatingly pronounce it the best machine we have seen for stacking hay or straw, handling haybales, wool bales, etc.

Visalia, Cal., Dec. 1, 1874. W. J. WHITE & Co.

MR. I. N. MATLICK:—We used one of your Stackers last year, and are fully convinced that it is THE STACKER. G. W. SMITH & BRO.

Visalia, April 9, 1876.

MR. I. N. MATLICK, Visalia, Cal.:—Your Stacker is superior to any machine I have seen for stacking, of which I am convinced in putting up 2,000 tons of hay last year. S. JEWETT.

Bakersfield, Kern Co., Cal., March 10, 1876.

MR. I. N. MATLICK, Visalia:—Having tried your Stacker to my satisfaction, I find it just what I want, and far superior to any other machine for the purpose. I have therefore purchased the right to build three upon our own farm. G. F. THORNTON.

Manager for Carr & Haggen.

Bakersfield, April 21, 1876.

MR. I. N. MATLICK, Visalia, Cal.:—I used your Stacker last harvest, and am fully convinced that it has no equal. PHILO D. JEWETT.

Bakersfield, Kern Co., April 22, 1876.

MR. I. N. MATLICK, Visalia:—Having used different stackers, and knowing the value of your machine by its practical work, deem it superior to any other. I have therefore purchased the right to build four Stackers upon my farm.

Bakersfield, April 22, 1876. WM. H. SOUTHER.

THE WORLD IS CHALLENGED FOR AN EQUAL.

ADDRESS: **I. N. MATLICK, Visalia, Cal.**

Or, J. M. GREGORY, Agent, San Jose, Cal.

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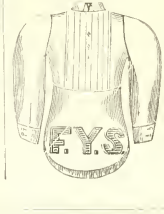

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Bigelow and Crompton Wiltons and Brussels,

Hartford and Lowell Body Brussels,

Hartford Three-ply Extra Super and Medium

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Double and Single Cotton Chain. [Matting.

Moquette Velvet Tapestry Rugs, and Mats and

A large line of Smyrna Rugs, direct importation,

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ATTENTION, HARVESTERS!

FIVE of PELTON'S Celebrated

Six-Fold-Geared Horse-Powers,

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Ho! For the Coming Harvest!!

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Two-Wheeled McCormick

AHEAD OF ANYTHING.

The cutter-bar of the Mower has the action of the Champion and the Buckeye, with Elasticity, Strength and Easy Control superior to all others. It is Powerful, Durable, Reliable; costs LESS than other first-class machines, lasts longer, and needs no repairing for years.

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Has the agency for these machines in Santa Clara, San Benito, Santa Cruz, and Monterey Counties. Depots of Sale will be established in the towns of Gilroy, Hollister, Salinas, Watsonville, and Santa Cruz. Farmers will find it economy to see and examine these machines before buying others.

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The California Agriculturist

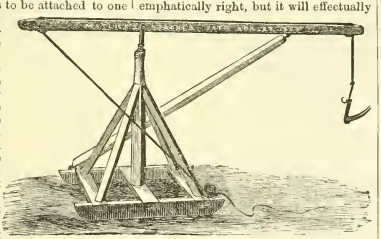
AND

LIVE STOCK JOURNAL.

Vol. 7--No. 6.] SAN JOSE, CAL., JUNE, 1876. [SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

MATLICK'S HAY DERRICK.

A good derrick to use in the hay field, and at the stack; one that is easily moved from place to place; always in readiness for work; that will lift light or heavy weight perpendicularly and swing it at once to its place without trouble, and return to its former position; that can be managed with the least number of hands—such a derrick has long been desired by our farmers, and is shown in our illustration. It is constructed upon an entirely different principle from the old arm-derrick that is held up with guy-ropes. It is the embodiment of an original idea, wonderful at once for its simplicity and adaptability. The upright post upon which the horizontal beam is pivoted, is thoroughly braced to a frame, which, as will be seen in the illustration, is a sled that can be drawn and placed where wanted by the same team that is used to raise the weight. This same frame can be set upon wheels if desired, but for ordinary use it is not necessary. The horizontal beam is supported at two points, first upon the center post, and second upon the long brace that the cut shows to be attached to one corner of the sled frame and reaching up to near the end of the beam. This brace is the real genius of the derrick. The only rope used is the one to which the fork is attached. This runs through blocks over the beam and down through a block attached to the corner farthest from the brace. The horse pulling from this block raises the fork directly from the ground or load, the derrick beam remaining motionless, until at a given hight a stop in the rope causes the motion of the team to swing the beam around with a slight upward motion to where it is desired to drop the weight, after which the beam at once returns to its place without any assistance. This voluntary motion is induced by the gravity of the swinging brace, which presses in that direction from the position of its foot. We have thus particularly explained the working of this derrick because it is constructed upon a new principle, and is deserving of the attention of everyone wanting an apparatus for the purposes for which this is designed.



Mr. Matlick, the inventor, has been introducing his derricks in our county lately, and we hear but one expression, and that a very favorable one.

FINE STOCK AND AGRICULTURAL FAIRS.

It is a cheery sign for the early inauguration of something better than horse-race gambling at our county and state fairs, when our stock men come boldly forward, and propose to take *back seats* no longer. Year after year they have been content to be run over and throwu dust upon by the fast men and horses, who have monopolized agricultural fairs for purposes of gambling and grand carousal. Not exactly content, perhaps, for they have kept up an incessant grumbling, but nevertheless have submitted in a manner that showed a subjection anything but sublime. Our local Santa Clara Valley Agricultural Society has really treated them better than any other, and has, in consequence, been favored by better exhibits of stock. Several stock breeders, for a year or two back, have declined to exhibit at all at the State fair until a different order of things prevails.

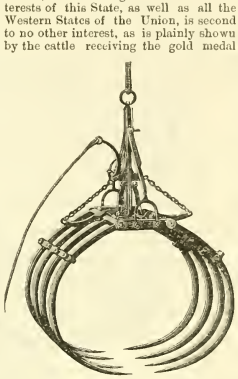
Finally, the matter seems to have come near enough to a tangible focus to show some force. All that is now needed is a very general unity, not only of all stock breeders, but of all legitimate industrial interests, upon the ground that the horse-race gambling and liquor-drinking have got to be separated from the respectable exhibits of worthy productions. This will be radical because emphatically right, but it will effectually cure the now disorganized condition of fairs generally. As there can be no harmony between right and wrong, the question of policy as to which should rule is the all-important one. Will it not be best to make short work of the thing, and end the trouble at once, by ruling out the pool-race and ruling in the worthy and the beneficial productions? If you cannot draw as big a crowd, you can get a better one; and if you don't take in as much money at the gate, you can make the fairs a moral and material success, *pro bono publico*, which is something which has not been accomplished heretofore to any great extent, surely.

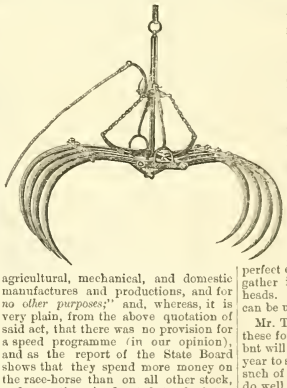
Col. Younger's address before the Cattle-Breeders' Association, shows the true spirit of the stock breeders upon this important question. And as a proof that they are in earnest, we now append a series of resolutions reported by a committee of the Association. Owing to the reluctance of other papers to publish them in full, we are the first to spread them before the public. We only regret that the resolutions are not more radical:

Mr. President, and Gentlemen of the Thoroughbred Cattle-Breeder's Association:

Your Committee, appointed for the purpose of drafting resolutions relative to the exhibition of cattle at the State Fair, would most respectfully report as follows:

That after duly considering the whole matter, and believing that the cattle interests of this State, as well as all the Western States of the Union, is second to no other interest, as is plainly shown by the cattle receiving the gold medal over all other stock for several years past at the annual exhibition of the State Society; and, whereas, under an act to incorporate a State Agricultural Society, etc., the latter part of section 2d of said act reads as follows, viz: "and for an exhibition of the various breeds of horses, cattle, mules and other stock, and of agricultural, mechanical, and domestic manufactures and productions, and for *no other purposes*;" and, whereas, it is very plain, from the above quotation of said act, that there was no provision for a speed programme (in our opinion), and as the report of the State Board shows that they spend more money on the race-horse than on all other stock, and more time is devoted to the interests of the race-track than all other interests combined; therefore, be it





Resolved, That we hereby request the State Board of Agriculture to give more attention to the cattle interests of this State, and do away with the *daily* parade of cattle, as we believe that it is very injurious as well as expensive, and no good derived from it; we also ask that the ten per cent. entrance fee, wherever it applies to cattle in the premium list, be stricken out, as we think and believe it unjust to make an exhibition and pay for it; we further request and ask that our cattle may be exhibited and passed upon in front of the grand stand, the ribbons tied on the successful animals, and the award declared at the time by the Marshal, as is done in other States.

Resolved, That we make the above reasonable requests, and that unless they are complied with, this Association will make no exhibition of cattle at the State Fair.

Resolved, That a copy of these resolutions be sent to the secretary of State Board of Agriculture, to be by him laid before said Board; and that the said secretary is hereby requested to notify the secretary of this Association what action they may take on the above resolutions.

(Signed) ROBT. ASHBURNER, CYRUS JONES, J. D. CARR, } Com.

Sacramento, April 19, 1876.

TABOR DERRICK HAY FORK.

Next in importance to a good derrick is a good hay-fork—one that will gather up, hold onto, and carry into place a large or small grab with equal facility, and that is under perfect control in all positions. Such an one is the Taber, the late invention of Orrin Taber, of San Jose, and manufactured in San Jose.

This is certainly a meritorious invention. Our illustration will give an idea of the way it works, but to be appreciated it must be seen. It grapples onto the hay with a leverage power, increased with the weight of the load. The grapple forks are separately axled into a huge bail, as shown. Each jaw of the fork has two arms at right angles with its axle, one of which the weight of the fork draws upon to open the jaws; the other and opposite lever arm the whole weight draws upon to close the jaws when gathering and lifting. An admirable arrangement for dropping the load completes this almost perfect thing. Besides handling long hay and straw with perfect ease and certainty, it will also gather in its huge grasp chaff or grain heads. With this fork a header wagon can be unloaded speedily.

Mr. Taber has already more orders for these forks than he can fill this season, but will probably be able before another year to supply the demand. Meanwhile, such of our readers as are interested will do well to remember this and examine into its work and merits.

Born.—San Jose, May 11th, 1876, to the wife of S. Harris Herring, a son.

California Agriculturist
AND
Live Stock Journal.
$1.50 Per Annum.

PUBLISHED MONTHLY BY THE
CAL. AGRICULTURIST PUB. CO.
S. HARRIS HERRING, Editor.

OFFICE:—Over the San Jose Savings Bank, Balbach's Building, Santa Clara Street, near First, San Jose.

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RATES OF ADVERTISING:

Per one Column	$12 00 Per Month
" half Column	6 00 " "
" fourth Column	3 00 " "
" eighth Column	2 00 " "
" sixteenth Column	1 00 " "

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Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

Messrs. Field, Combs & Kendall, of San Jose, are certainly deserving of special mention for doing fine marble work, as every one who examines will attest. They employ a large force of men, and display work that for elegance and finish cannot be surpassed in this State.

One number of a journal like this can not contain articles upon every subject of general interest. Next month several departments not found in this issue will be given. Now is a very busy season with the most of our readers and correspondents. If you can not write long articles, send us something short and spicy, but don't neglect us.

Another New Fruit-Dryer.—Our fellow townsman, Mr. Wm. Aram, has secured a patent for a new fruit-dryer. His invention consists, first, of a basement where heat is generated in a furnace; second, a large room above divided into apartments by movable partitions; third, the manner of letting the heat into either or all of these at will; fourth, the movable racks for the screens which hold the fruit to be dried, and fifth, the manner of introducing and removing the racks containing the fruit. Mr. A. says that he can build one of a capacity to dry 200 boxes of apples or pears per day for $400. We have examined the drawings, and can see many practical points about the apparatus which we think must bring it into strong competition with the Alden and others. Mr. Bird, of San Jose, will run one this season, and thinks it is just about as near the thing as any yet invented.

Artificial Stone.—The Asbestian Stone Company, of San Jose, is now actively engaged in making many beautiful designs of work. They are laying down pavements for garden walks, making steps, cemetery work, vases, and a variety of solid and ornamental work. This stone is worked in a plastic condition, and it is claimed that it can be cheaply wrought into beautiful forms, and on hardening will endure a long time. J. W. Combs, the noted marble cutter, is president, and Alex. Murgotten secretary, and Wm. Elm Superintendent.

A Matter of Policy.—CAL. AGRICULTURIST PUB. CO.: "Six Months Among the Bees," in May number, is a libel on the country, undoubtedly, and was written, I presume, by some one when he had the blues. It is a bad policy to republish anything of the kind with regard to any portion of the State. Suppose all the papers in the different localities should republish the growling articles with regard to all other localities.—you see it would tend to prevent immigration from the East, and lengthen the time of our enforced employment of the heathen.

Yours, truly,
O. L. ABBOTT.
Santa Barbara, May 17th, 1867.

To publish either the glowing or the "blue" side only, would be unfair. Within the past two years, we have given a great deal of matter flattering to the bee interests in San Diego. We desire our readers to see every side of the question, that they may be better able to form an impartial opinion. On general principles, our newspapers, by publishing only the glowing side of the country, flattering to each locality, deceive the people East, and they come here to be disappointed, and curse the country and people they find so very different from what they were misled to believe. Much might, with justice, be said upon this question. We have often felt like denouncing the over-drawn and one-sided representations sent abroad. We want immigration, but not such as is induced by false advice. To do as we would be done by in this as other things, must be about right.

A look about our immediate locality and surroundings shows a season of business that promises liberal returns.

Enright is running a large force on his 20 new thresher engines and repairing of several others. His place looks like a large locomotive depot at first glance.

McKenzie's foundry has just turned out the largest iron quicksilver furnace ever made for the New Almaden mines, and will soon commence another one.

At the Alameda Foundry, Watkins & Co. are turning out several new engines, a new thresher, and doing a variety of other work.

In this connection we will mention the new patent mammoth horse-rake manufactured by Mr. Balbach, at his shop on Fountain and Second streets. It is constructed something on the principle of the spring wire-tooth rake, but the teeth of this are very heavy and strong, and two horses and two men are required to handle it. It is mounted on wheels and worked with levers, the men riding. Several have already been made, all to order, and give splendid satisfaction. It is no toy arrangement, but is made to do work "and no foolishness."

Our wagon shops are running full hands. Probably the best wagons, as well as the handsomest made on this Coast, are now turned out in San Jose.

All classes of industrial business seem to be rushing at present, in harmony with the prospects of big crops and productive success generally. New houses are going up all over town. New orchards have been planted, and our nurserymen are all enlarging their grounds and business.

Another new canning factory has been erected, and the old firm of Dawson & Co. have greatly enlarged their factory and capacity for putting up fruit and vegetables. Their reputation is deserved, for they put up the best fruit in the best manner, and no trickery or deceit.

Farmers are cutting one of the best crops of hay ever gathered.

The late frosts have damaged early-planted tomatoes and squashes, but the damage is not irreparable, as it is not too late to replant. Mr. Chas. Caruc's twenty acres of early tomatoes are not injured, but are branching out beautifully. He expects to get 25 tons to the acre.

Fruit prospects are good, although strawberries are a partial failure in some spots, from the effect of worms at the roots of the plants. Twenty bushels or so of salt to the acre, at one dose, would probably straighten them out and convert them into fertilizers.

The Mount Hamilton observatory road will be finished within a month. New enterprises are seen on every hand. If energy will insure success in town and country, surely our people should prosper. Our exchanges over the State all speak of full crops and fine business prospects generally. If we deserve the blessings we receive, our happiness may be real.

Medical Inquisition.—The doctors who live upon the medicines others eat are successful—if not in saving lives, at least in making a law that gives them a monopoly. They were not satisfied with keeping their patients in the dark with Latin prescriptions that put 25 per cent. of all drug money paid to druggists into their own pockets, besides exorbitant fees for services pretended; not satisfied with a fair showing of their "science" against so-called "quackery" and common sense, but they must be "protected," that is, must condemn as criminals, whoever differs from their schools of practice. Whoever practices now must hold diplomas from their school of colleges—must pass examinations at their board of inquisition. What does this mean? That the women practitioners who have been debarred from the benefits of a class of medical schools and have been graduated from others, must not attend to their own sex in times of need. These monopoly-diplomad men doctors must have all such delicate cases. There is profit and prestige in it that they cannot afford to lose. It means that liberal ideas upon health subjects must be crushed out and made dishonorable. The medical priest-craft must be honored and patronized. It means that this same class of privileged dictators want a clear field, so that they can, with even greater impunity, destroy the sensitiveness and modesty of daughters, the purity of wives, and the honor of husbands and fathers. They have in this act thrown down the gauntlet which they will find some not too cowardly to pick up. We expect, law or no law, to employ whoever we please, if we need medical aid in our family, but it will never be one who is inside of this iniquitous inquisition ring

The Mechanics' Institute will hold the eleventh Industrial Exhibition in San Francisco this season. Application for space is now in order. Goods will be received July 25th. Exhibition opens August 8th. This fair will be called the California Centennial Exhibition, and every arrangement is making for a grand fair.

City Gardening.

HINTS FOR THE MONTH.

OUR illustration for this department this month is a beautiful aquarium and fountain suitable for in-doors, a hall or conservatory, or for a small yard, or a retreat in a large one. Our city florist, Mr. Mitchell, can fill orders for such.

The care of an aquarium properly comes under the head of City Gardening as the plants it contains should not be the least attractive portion, and are quite essential to the health of the fishes, by absorbing the effete matter and supplying fresh oxygen to the water. Many beautiful plants will grow quite as well rooted in the sand at the bottom and rising above the water. Besides, "there is scarcely a weed to be found in any brook but may be safely transplanted to it—a little washing and trimming being necessary to remove decaying matter." Want of space this month, only, prevents us from giving quite full directions how to proceed. A well-stocked aquarium is certainly a most beautiful and companionable object.

In her "Familiar Talks," this month, our practical correspondent, "Snip," wants to know how to have good success in growing moss and ferns in open air. The conditions most favorable will comprise these essentials: A composted soil rich with vegetable mould; shade from the direct sun during the greater part of the day; a quiet atmosphere—wind is injurious to them; plenty of moisture—in fact, they should be completely saturated once a day, either by plunging into water or by other means; the evener the temperature the better. In-doors, near a closed window, where the morning sun strikes them an hour or two, is the most favorable place. Our moss kept fresh as long as the bath was attended to regularly, nearly two years, and the ferns did not grow stunted until the third year—and then we think only through neglect, while our family was away. A little ammonia occasionally with the water, or the leeching of stable manure, should be given to keep up the fertility of the soil—or a portion of the soil may be removed from the stand or basket and fresh compost put in its place.

A large warden case, where the moss and ferns grow secluded from the change of air, and are uniformly moist under the glass, of course, is still a better place for this class of plants. But the rules given above will prove quite successful with our ordinary hardy mosses and ferns, and nearly as satisfactory.

As to the white mold upon rose buds and bushes, it is a cryptogamic growth, a sort of plant-infusoria that is very bad in moist situations. We notice that roses growing in the full sunlight during the entire day are less troubled than the same varieties which grow where partially shaded. We know of no absolute remedy against this white mould. Jackson Lewis, of San Jose, who has the finest collection of flowers in the State, has paid a good deal of attention to this blight, and tried numerous experiments, but finds that dusting often with the flour of sulphur is as good as anything he can do. The Giant of Battles seems to be worse infested than any other variety.

The green aphis is a very annoying pest in a flower garden. A thorough dusting of the trees or plants infested with dry slacked lime, as often as the aphides make their appearance, seems to

be about as effective as anything, where one has not the time to make clean work with snuff or tobacco smoke or sulphur fumes. The same treatment for slugs is also good; but, of course, a thorough hunt evening and morning, with a dish to put them in for final scalding, is still better.

The woolly aphis, which infests apple trees and some others, can be best exterminated by a strong soap-suds of whale-oil soap, or of strong common suds with some kerosene or carbolic acid mixed in. Tie a swap on a pole or broom-handle, and make clean work if you can. The roots of infested trees can be helped by the application of a bushel of gas-house lime spaded all about the roots.

The scale bark-louse is terrible on orange trees, the oleander and several other trees and plants. The same wash, with the addition of a little blue stone, will, after a few applications, get the best of them. If one has but a few trees it will pay to handle them for such insects and grubs as are enemies to the garden.

Poetry.

John Reed's Musings.

BY BAYARD TAYLOR.

SEE, as I lean on the fence, how wearily
trudges Dan,
With the feel of spring in his bones, like a
weak and elderly man;
I've had it many a time, but we must work
when we can.

But day after day to toil, and ever from sun to
sun,
Though up to the season's front and nothing be
left undone,
Is ending at twelve like a clock, and beginning
again at one.

The frogs make a sorrowful noise, and yet it's
the time they mate;
There's something comes with the spring, a
lightness or else a weight;
There's something comes with the spring, and it
seems to me it's fate.

It's the hankering after a life you have never
learned to know;
It's the discontent with a life that is always thus
and so;
It's the wondering what we are, and where we
are going to go.

My life is lucky enough, I fancy, to most men's
eyes,
For the more a family grows, the oftener some
one dies,
And it's now run on so long, it couldn't be other-
wise.

And sister Jane and myself, we have learned to
claim and yield;
She rules in the house at will, and I in the barn
and field,
So, nigh upon thirty years!—as if written and
signed and sealed,

I couldn't change if I would; I've lost the how
and the when;
One day my time will be up, and Jane be the
mistress then,
For single women are tough and live down the
single men.

She kept me so to herself, she was always the
stronger hand,
And my lot showed well enough, when I looked
around in the land;
But I'm tired and sore at heart, and I don't quite
understand.

I wonder how it had been if I'd taken what
others need,
The plague, they say, of a wife, the care of a
younger brood?
If Edith Pleasanton new were with me as Edith
Reed?

Suppose that a son well grown were there in the
place of Dan,
And I felt myself in him, as I was when my
work began!
I should feel no older, sure, and certainly more
a man.

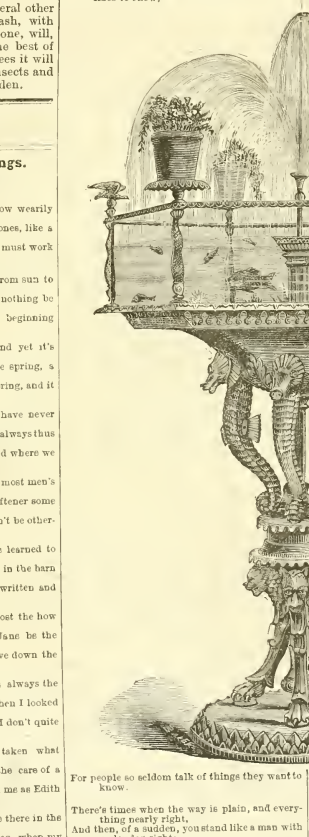
A daughter, besides, in the house; nay, let there
be two or three!
We never can overdo the luck that can never
be,—
And what has come to the most might also have
come to me.

I've thought when a neighbor's wife or child was
carried away,
That to have no loss was gain; but now, I can
hardly say:
He seems to possess them still, under the ridges
of clay.

And share and share in a life is, somehow, a
different thing
From a property held by deed, and the riches
that oft take wing;
I feel so close in the breast!—I think it must be
the spring.

I'm drying up like a brook when the woods have
been cleared around;
You're sure it must always run, you are used to
the sight and sound,
But it shrinks till there's only left a stony rut in
the ground.

There's nothing to do but take the days as they
come and go,
And not to worry with thoughts that nobody
likes to show,



For people so seldom talk of things they want to
know.

There's times when the way is plain, and every-
thing nearly right,
And then, of a sudden, you stand like a man with
a clouded sight;
A bush seems often a beast, in the dusk of the
falling night.

I must move; my joints are stiff; the weather is
breeding rain;
And Dan is hurrying on with his plow-team up
the lane.
I'll go to the village store; I'd rather not talk to
Jane.

Harvest Song.

O thanks for the bountiful harvest,
And thanks far the joy that it brings;
The harvest of hay from the meadows,
Where the bobolink cheerily sings.

O thanks for the corn, bright and golden,
And thanks for the wheat and the grain,
For the bountiful, bountiful harvests,
That add to the harvester's gain.

We rejoice in the fruits of the season,
For the apple, the peach and the pear;
And the hosts of wild plums and berries
That grow without culture or care.

We've a love for the ripe, rich pumpkin;
And 'tis a love that seldom dies;
But the love is many times stronger
For our mother's good pumpkin pies.

We delight in large fields of cabbage,
(We've an Irishman's "tooth" just now)
And what we don't want for the table
Will be food for the nag and the cow.

We've a relish for the sweet potato,
As well as for the Irish kind;
And to eating of the "Grant" tomato
Our habits and tastes are inclined.

'Tis a fact—and none will deny it—
That much of our living is bread;
Were it not for the habit of eating,
The life that now is would be dead.

O thanks for the bountiful harvest!
And thanks for the joy that it brings!
We rejoice in the gifts of Natnre,
Whence much of our happiness springs.

Go Work Upon a Farm.

Will S. Hays, the eminent Southern song writer and composer, has published a song entitled "Go and Learn a Trade." Just at this time, with factories and shops closing up, and mechanics begging for bread in some sections of the country, it seems to me that such a song is quite out of place. In view of this fact, I beg to offer your readers the following agricultural song:

The song I sing to you to-day
Is not to learn a trade;
For I am sad the truth to say—
That song aside is laid.
The mills are running on half-time,
The shops give forth no noise,
And it is hard to find a dime
Among the 'prentice boys.

Chorus—
The song that I shall sing to you
Your troubled hearts will calm;
If you have nothing else to do,
"Go work upon a farm."

The stores are filled with idle clerks,
Because the times are dull;
And he his duty plainly shirks—
When shops and mills are full—
Who seeks to learn a trade, or tend
The counter of a store,
In hopes the future yet will send
A fortune to his door.

Chorus—
Ah, vain are all such hopes as these,
That surely end in harm!
Don't seek to sit 'neath shady trees—
"Go work upon a farm."

Oh! why should men in cities pine,
Or idly stay in town?
Why loaf around, and crossly whine
That "things are upside down!"
Can this bring bread to wife and child,
And make the future bright?
Can this turn the weather mild,
Or furnish heat and light?

Chorus—
Such men should listen to my song,
And in it find a charm;
It tells them how to get along—
"Go work upon a farm."

Let no man starve for want of bread—
The product of the soil—
For all can still be amply fed,
Who will but share the toil—
The honest, manly toil that brings
The harvest season round,
When the glad farmer gayly sings,
Because of fruitful ground.

Chorus—
This, then, shall be the song we sing,
The whole world to alarm,
And loudly let the chorus ring—
"Go work upon a farm."
—(Sidney Herbert, in Semi-Tropical.

A Farmer's Song.

We envy not the princely man,
In city or in town,
Who wonders whether pumpkin vines
Run up the hill or down;
We care not for his marble halls,
Nor yet his heaps of gold—
We would not own his sordid heart
For all his wealth thrice told.

We are the favored ones of earth,
We breathe pure air each morn;
We sow; we reap the golden grain;
We gather in the corn;
We toil; we live on what we earn,
And more than this we do—
We hear of starving millions round,
And gladly feed them too.

The lawyer lives on princely fees,
Yet drags a weary life;
He never knows a peaceful hour—
His atmosphere is strife.
The merchant thumbs his yard-stick o'er,
Grows ragged at his toil;
He's not the man God meant him for—
Why don't you till the soil?

The doctor plods through storm and cold,
Plods at his patient's will;
When dead and gone he plods again
To get his lengthy bill.
The farmer (bless his noble soul!)
He grasps the mighty earth,
And stamps it on our daily sheet,
To cheer the farmer's hearth.

We sing the honor of the plow,
And honor to the press—
Two noble instruments of toil,
With each a power to bless.
The bone, the nerve, of this fast age,
True wealth of human kind—
One tills the ever generous earth,
The other tills the mind.
—(Boston Investigator.

Treat laboring man and beast well.

Sheep and Goats.

SHEEP AND GOAT BUSINESS RELATIVELY CONSIDERED.

It may not seem exactly fair to draw a contrast that is so one-sided as is this at the present time. But in consideration of the fact that within three years some of the principal papers of the State decried the raising of Angora goats as something impractical, and also how the sheep breeders would generally sneer at the business, we feel that the goat men have a right to crow, just a little, if they feel like it.

There is now a general depression in the wool market all over the civilized world that is most discouraging, and that has a tendency to make the business of sheep breeding on a large scale rather precarious. The price of sheep is correspondingly low, and the business does not pay at all at present—in fact, many herds are sinking money.

Returns from the manufactories East of prices; and for mohair of this year's clip, will equal that paid last year. Mr. Bailey has returns from the first lot of 800 pounds, sent early, which prove this. Probably next month we will be able to present full returns. The prices of, and demand for goats have never been more encouraging to breeders. The Robe and Glove Company, in San Jose, have pressing orders that they can hardly fill—several from the Eastern States. An advancing civilization must increase the demand for such goods as are produced from the skins and fleece faster than the supply can possibly increase for many years, even upon this coast, where they can beat the world.

We have always favored this industry; indeed, the Angora goat has been the special pet of the CALIFORNIA AGRICULTURIST, and we are more than ever enthusiastic upon the subject, not from any pecuniary point, for we do not own nor have we an interest in a single goat, but on general principles.

We would not condemn the sheep business by any means, and we advocate the *best breeds*, and the keeping of them where they can get *plenty to eat during the entire season*. The old way of keeping 10,000 sheep upon as many acres of uncultivated lands, allowing them to fatten half the year and starve the other half, we never could see anything in to recommend.

A civilized sheep farm should consist of not only a hill or upland range, but of cultivated fields where alfalfa, and grain, and hay can be produced to supply good and equal feeding during the entire year. One hundred acres rightly managed will keep as many sheep as one thousand on the old plan, and produce twice as much wool to the animal, worth twice as much per pound as the ordinary clip. The sooner the wild, uncivilized, slip-shod sheep-raising is exploded the better for the country.

If sheep are well fed during the entire year, one long clip will pay better than the two-clip system now in vogue. The reason why sheep are sheared twice each year is not that an extra growth in this climate justifies it, but because the starving process during a portion of the year causes a week place in the fibre which breaks in manufacturing. Proper feeding would remedy this. These remarks will as well apply to goats as sheep. The goat men find it to their advantage to feed equally during the year, as Stockton and Buffum's experience last year proves.

The lessons of stock raising generally, as taught from experience in this State, are in favor of *best breeds and cultivated farms*. Under proper cultivation, land will support from four to ten head more of stock to the acre, besides supporting and enriching a large population of enterprising inhabitants. Of course, there are some lands fit only for pasture. But these should be used in connection with better lands a portion of the season.. While the animals are feeding upon the light pastures, the cultivated lands are producing hay and grain for winter, and will also make late pastures on the stubble. It is time for sheep men and cattle men to awaken to the fact that there is more money in a flock or herd of good stock, kept in a civilized way, than in the common "plug" stock running half wild upon wild lands in a manner that none but savages should ever think of imitating. We have little patience with, and precious little sympathy for the class of stock men who pursue a system so antagonistic to civilization and adverse to their own best interests.

THE ANGORA GOAT.—Colonel R. W. Scott, who is counted authority upon the subject of Angora goats, has lately written an interesting article touching upon the history and value of the Angora goat in this country to a Southern paper, the Sanford *Journal*. We take pleasure in transferring the same to our columns:

Dr. J. B. Davis, of South Carolina, was sent to Turkey as a Commissioner of the Uniten States, upon the application of the Sultan of Turkey, for the purpose of teaching his subjects cotton-raising, in the year 1846. After a residence of some three years, finding the climate unsuited for cotton raising, he returned home, bringing with him the Angora goat from Asia Minor. In 1849, he landed in Charleston with seved ewes and two bucks of the pure Angora, which he at the time, under a misapprehension, probably, called the Cashmere goat. These were, unquestionably, the first goats brought into this country. The Earl of Derby obtained a pair from him, who stated that they were the first of them seen in England. A small flock had, prior to this time, been imported into France, and located on the Pyrenees.

Ever since the first introduction of these goats into the United States, there has existed in the popular mind much error in regard to their species—errors due, principally, to the action of importers and breeders themselves, mis-naming this animl is, either through ignorance or interest. Dr. Davis is responsible for the name of "Cashmere" being applied to these goats. The Thibetian or Cashmere goat comes from the famed Vale of Cashmere, in India, which is a great distance—some three or four thousand miles—from Angora, in Asia Minor. It is an entirely distinct animal from the Angora goat, though some European naturalists have claimed that the two races have affinities in common. This goat bears wool only "by ounces," while the Angora produces mohair "by the pound"—the best ewes yielding from three to seven pounds each, and best bucks from seven to ten pounds each.

In the year 1852, Mr. Peters purchased of Dr. Davis his entire flock of pure breeds, consisting of eight ewes and three bucks, for which he paid the sum of sixty thousand dollars, (a sum which, by some, may be considered a very enormous price). He has kept a perfect record of these goats since they came into his possession and obtained their prior record from Dr. Davis, so that he can, at any moment, tell where the stock is at this day. But few of the imported goats have proven to be of much value to breeders who understand their business. Very few are superior to a third or fourth cross of a pure Angora on a common goat. In a letter written by Mr. Peters, he says:

"In 1856, I found that the fourth cross, passed on the native short-haired ewes, with selected purebred bucks, when bred by careful selections, produced an animal superior in every respect to the imported, for breeding purposes excepted. I owned a flock of 500 grade ewes in 1859, bred with great care, each animal marked to designate its grade. These I distributed, by sales of flocks from ten to twenty ewes with a pure-bred buck at the head, to all parts of the West and Southwest during the years 1860 and 1861, and made a very handsome profit. The forehead has soft hairs of less length, less applied to the skin, in parts, curled. The hair of the beard, which is pointed and moderate dimensions, being six inches in length. (German measurement) is stiffer than the hair of the rest of the body, but less so than the beard of ordinary goats. I ascertained, however, that when resold, in every instance, the word *grade* was expunged, and they sold as 'Peters' *Cashmere* goats of the Davis importation.'

"I sent a small flock of grades to Pennsylvania, in the year 1859, and by 1866 they were advertised and sold as if of pure breed.

"In the year 1866, I sent a flock of over 100 head to Ohio, all grades, but a half dozen bucks. They were sold, by me as grades, and the next year sent West as *Cashmere*."

These statements show the / "dark ways" formerly resorted to by unscrupulous dealers, in the sale of goats—practices which have injured this new branch of wool production in America beyond computation. Mr. Peters continues:

"The owners of goats in Asia allow them to run at large in very extensive flocks, and make no selection in breeding; and, although fine animals might be had high up in the hills, by a person who could go there and remain a year, or all, or nearly all, sent to this country come from localities easy of access, and not one male in a hundred is fit to breed from to improve a flock.

"The Vicuna and Llama cannot be bred to any advantage, and cannot be acclimated to live on an elevation of less than 5,000 feet above the sea. The Angora ought to be 3,000 feet, but will thrive near the sea level, if allowed a wide range in woods or old fields. They are not a grass-eating animal, and when kept on such, in small inclosure, soon become unhealthy. They are a browsing animal and cannot stand being high fed with grain and grass."

The description of the physical characteeistics of the two races, when compared, show how different they are.

The description of the Angora, given by M. Brandt, an European naturalist of high repute, and director of the Museum at St. Petersburg, in 1855, is minutely as follows:

"The magnificent example of the Angora goat, which the Museum of the Imperial Academy owes to M. Tchihatchess, (the learned Russian traveler) produces, at first sight, the general impression of a domestic goat, when attention is directed to its thick and silky fleece, to its ears turned downward, and its inconsiderable size. But it is precisely these traits which impress upon this animal a distinct seal, which gives it the character of a peculiar race whose origin is not the same as that of the domestic goat. The extremity of the snout, the cheeks, the nasal and frontal bone, as well as the ears and lower part of the legs below the tarsal articulation, are covered with *greyish white tint*, are longer than the head; at the lower part, the interior marginal bone turns inward in such a manner, that, in this part, they appear broad seen from the front, and narrow when seen from the side; at half their extension, they direct themselves moderately backward, and *turn spirally outward*, so that their extremities, directed upward, are very much separated one from the other, and circumscribe a space gradually contracting itself. The whole of the neck as well as the trunk, covered with long hairs, which, particularly on the neck and lateral parts of the body, are twisted in *spiral curls*, having the appearance of loosened ringlets, it being observed, at the same time, that they reunite themselves into rolled tufts, a disposition which is less marked in the anterial portion of the neck. The hairs that exhibit the greatest length are situated above the foreleg, and are nine and one half inches long. Those of the neck are a little shorter, and are nine inches long, and those of the belly, eight and a quarter inches. The length of the hair with which the lateral parts of the body, as well as the back, as covered, is only seven and one-half inches, and that of the hind legs six to seven inches long. Finally, the slight, stiff hair of the tail is about four inches long.

"The color of the robe of the animal is a pure white, here and there slightly inclined to yellow. The hoofs, somewhat small in proportion, are, like the horns, of a greyish white tint. The hair is, without exception, long, soft and fine; it is at once silky and greasy to the touch, and shows distinctly the brilliancy of silk."

Prof. Lowe, of England, in his work on sheep and goats, describes this goat, which is known as the primitive goat of Angora district in the central portion of Asia Minor, as having "no undercouting at all, but long, white, silky fleece." In Asia there are nearly twenty varieties of fleece-bearing goats, of which the Angora is the most profitable. It is described as having "long, pendant ears, short legs, and heavy body. The fleece hangs in long, spiral, silky curls. The horns are heavy and spiral." Mr. Lendrum in his exceedingly practical and valuable treatise on the Angora goat, says there are, in California, "goats answering exactly that description." He owns pure breeds whose fleeces have been repeatedly searched without success, by different persons, to find kemp, or rough, coarse hair, which is so injurious to wool, because of its inferiority and harshness, preventing it from taking the dyes readily.

Now compare the above description with that of the Thibet, or Cashmere goat proper, and the difference between the two breeds will strikingly appear.

Mr. John L. Hayes, secretary of the National Association of Wool Manufacturers, read a valuable treatise on the Angora goat before the Boston Society of National History, in 1867, exhibiting much intelligent research. In this treatise, Mr. Hayes, quoting Mr. Sanc, the distinguished European naturalist, says the Cashmere, or Thibetian goat, "abounds in Central Asia, many thousands and miles from Angora, in Asia Minor, but whose origin is still obscure. The size of the Cashmere goat is quite large; the horns are *flattened, straight and black*, and slightly divergent at the extremities. The ears are large, flat and pendant. The primary hair, which is long, silky and lustrous, is divided on the back, and falls upon the flanks in wavy masses.

A PROSPECTUS OF PRINCIPLES.

To such of our readers as are already well acquainted with the stand we have taken, and the principles we have supported in conducting this journal, we need say nothing. But to our many new readers, and others who enquire about the character of the Agriculturist, we feel warranted in offering an inkling of some of the ideas we have always advocated, now believe, and propose to adhere to until we are properly convinced to the contrary.

To begin with, the Agriculturist is not a *policy* paper. Its motives are grounded in principle. If a thing is thought to be right, it hesitates not to support it; if wrong, that is sufficient reason why it should be opposed. It depends, for its patronage, upon being true to the best interests of humanity, irrespective of personal considerations. If it cannot stand upon such ground it will fall upon it. While it aims to be charitable to all, and will allow the fullest expression to opinions adverse to what it maintains, it is a journal of decided opinions. No blowing hot to-day and cold to-morrow—changing like a weather cock to suit the wind of vacilating public opinion or party interest. Nor is it a "milk-and-water" concern that reserves expression, fearful of offending those high in authority or influential in some circle. It aims, like the needle of a compass, to be true to common interests.

It is not political in any partizan sense—takes sides with no party—advocates the claims of no candidate for office—but, on general principles, supports reform measures of every kind that appear to be demanded for the general good. It deprecates official corruption, and, to secure honest and efficient legislation and reduce taxation, would reduce salaries of public servants to the standard of wages earned by the hard-working, honest and intelligent producer. It would see a broad patriotism displace the narrow extravagance shown in public affairs.

It would see a financial system founded in the honor and industrial responsibility of the people, and gauged to the necessities of business intercourse. The Government should not pay interest on money issued to banks, nor allow its issues fluctuated in value; and the speculator who would discount its value should be held guilty of treason and punished accordingly.

Monopoly of every description it opposes as wrong and pernicious. Our public lands should be held sacred to the actual settler. No individual nor corporation should be allowed to claim but a limited number of acres under any pretense. He who would hold more land than he can use, to the exclusion of another, should be held an enemy to his country.

Railroad corporations, now so powerful to extort unjust and unequal rates of fare and freight, and to control public affairs, should be shorn of such power. All lines of public travel, telegraphs and postal routes should become common property, and be strictly under Government control.

Co-operation is advocated for every department of business as a fundamental principle of advancing civilization, as a protective measure for the working and producing people, and as a measure calculated to properly secure the comforts of life to every deserving creature and equalize wealth to the advantage of all and injury to none.

Education it would see made public for all, and no child upon our soil should be allowed to be deprived of its advantages. It advocates higher principles of education. Our common schools and colleges should include in their tuition instruction in the use of such tools, principles and trades as are applicable to the wants of everyday life, and, by combining practical work with theoretical propositions and positive science, turn out men and women competent to grapple with life's realities.

With so-called "social" and religious questions, this journal is conservative. Discussions inimical to virtue, constancy and established marriage will not be admitted. It can never be the vehicle of immorality or vileness. While tolerant, it will not be the tool of any sect or creed, either of free-thought or religious denomination. It occupies a broader field of usefulness, interfering with no one's religious opinions, but holding fast to morality in the interest of all good people alike.

Woman is held to be of equal importance with man, and naturally entitled to all the rights, immunities and privileges of man, politically, religiously and socially, as a human being of equal endowments and rrsponsibilities. There is a Woman's Department open for such questions as properly come under it.

Temperance is advocated as of great moral and material importance. It is a fundamental virtue without which there can be no advancement in other directions. Intemperance is a blight that destroys the germ of development, and soon sinks man into hopeless degradation. The Agriculturist has never advocated the making of wine, brandy or other liquors as legitimate agricultural industries. It has constantly advocated the making of the best use of the grape, which is a noble fruit, highly nutritious and capable of being utilized as food in many ways and of becoming a blessing instead of a curse to mankind. It has often been shown, and can be proven to any reasonable man, that, aside from the moral part of the question, it is much more profitable, in California, to grow grapes for table, raisins, canning and shipping than for wine. We have made many enemies by the course we have taken, and lost much patronage also, but we must insist that we are right until we are otherwise convinced.

Its columns are open to discussions of all important subjects within the scope of its field, and all persons of opposite opinions, as well as others interested in any topic, are invited to communicate their ideas for the public benefit.

Horse-race gambling is another evil barnacled upon agriculture for respectable support that this journal has always vigorously combatted. This course has also brought it much abuse, and weakened its patronage; but it will never cease its work while gambling is a controling interest at agricultural fairs.

Advocating the best use of the soil and of all products of the labor of man, no article commending tobacco-growing nor hop-growing has ever appeared in its columns. It is not conceded to be in accordance with duty to advocate any thing destructive of health, or calculated to injure individuals, or the public weal.

The Agriculturist claims to be clear of any and all pecuniary considerations for any opinion appearing in its reading columns, editorial, selected or communicated from any person or party. Not one cent, directly or indirectly, has ever been received for "puffing," or for publishing any article as reading matter. Its voice is used purely in the best interests of its readers. While under its present management, the Agriculturist can never be bought to advocate anything, good, bad or indifferent. It shall never fall to that detestable position, so common with many papers to-day, of advocating a thing for pay, of claiming to be working for the good of the people while it is the hirling of some designing man, clique or party. It detests such perfidy, and as loudly condemns it as it does any other species of venal corruption.

The Agriculturist is not the *organ* of any order, clique or party whatever. While it is in full sympathy with Grange principles and good work for human advancement, it chooses to remain a free agent, advocating the good for the sake of the right, in the broad interests of all.

It admits none but respectable advertising to its columns. It allows business men to put their business before the people in a business manner, as a business proposition. No clap-trap, eye-catching, imposition advervising solicited or allowed, if we can help it. Any business that is not able to stand on its own merits, in a fair, decent advertisement, we would sooner not see represented in our columns.

Our departments for reading matter are numerous, and largely filled with original articles from subscribers, practicsl, common-sense articles for every day reading, applicable to every department of the farm and home. Among these we mention the Stock Breeder's department. There is enough solid reading, of practical use, in this department ment alone, during the year, to give the paper a great value. The Dairy, Sheep and Goats, Porcine, The Horse, Pisciculture, Apiary, Poultry Yard, The Orchard, The Vineyard, Vegetable Garden, The Grain-Grower, and out-of-doors farming generally, are always treated upon from a practical standpoint. All articles are prepared or selected with special reference to their applicability to the Pacific Coast. The subjects of Irrigation, Alkaline Soils, Land Monopoly, Timber-growing, Capital and Labor, the proper cultivation of the soil for our climate, and, in fact, all topics of interest and information, such as are needed by the practical farmer, are given in successive issues.

The Editor was educated to hard work on the farm, and in the nursery, orchard and garden, and has been twenty years upon the Pacific Coast.

The best part of the farm—the Household—is not neglected. In fact, this journal is so largely household in its get-up as to be a special favorite with farmers' wives, and with all families where it is known. Among the writers for these departments are many of the best upon the Pacific Coast, We might say a good deal in praise of its contributors without undue flattery. Every lady should specially examine the columns of the Agriculturist.

The departments Household, Domestic, Hygienic, Educational, Boys and Girls, City Gardening, and Woman, are almost entirely filled with original articles each month, and of a most interesting character. The beautiful and useful are together combined in its contents and make-up. Man's nature not only demands to be supplied with material comforts, but the things that feed intellectual and moral life and induce to progress of soul. The esthetic nature needs its food of subtler things, and grows upon beauty in everything. Such tastes as are allied to the finer sensibilities and really give us the purest joys of life are by no means overlooked in the spirit and design of the Agriculturist. Its beautiful frontispiece, on cover, designed, fashioned and engraved by woman's head, heart and hand, is in strict harmony with its purposes—even as much so as the sterner subjects that relate to the practical parts of life.

Every general reader of this journal will bear the publishers out in the above statements. It is from such as have not become acquainted with the California Agriculturist and Live Stock Journal, a Household Magazine and Rural Monthly for In-doors and Out, that the publishers respectfully ask an examination of its merits. And if the price and character of the paper suits, your subscription is solicited, and your influence in further extending it will be gratefully acknowledged.

BRUTE ANIMALS COMPARED WITH MAN.

How Do They Differ from Us? Have They Minds? Will They Live Again?

BY J. A. CHITTENDEN.

In what respects the the dumb animals resemble man, and what are the limits of the resemblance, it may be well sometimes to consider. One difference that would first occur to most minds is that the brute animals have not the power of speech; next, that they have not thinking minds—that they do not reason; and, finally, that they do not possess immortal spirits.

Let us see how much they resemble us. In the matter of bodies containing the bony framework, the muscular covering, the arterial, venous, nervous systems, etc., they are like ourselves. They have sight, hearing—indeed, all the senses. Have they minds also?

The mind is that part which thinks, wills, remembers and reasons. Has the brute all these evidences of mind?

Some seem to regard the brute as a mere mass of organized matter endowed by its Creator with what they call instinct. That is, it has an inward prompting to est without knowing why it eats; it runs away from danger, but don't know why; it may run so long as possible, and when running will no longer answer, it will hide in the best place at hand or turn upon its pursuer in self defence, but never reasons about it. Men say it is instinct.

The bird looks about for the best place where it may build its nest. It examines this place, and that, and the other, and after a good deal of investigation makes a selection, and you are obliged to confess that it chose well with reference to convenience of construction and security from its foes. But men say it did not reason: it did not know why it made all that examination and finally decided or chose so well. This would be according to our ideas of instinct. Men have long so decided in regard to the dumb animals. They have set up a pillar, inscribed upon it "*Ultima Thule*," and have rested. No, not quite. Here and there the conviction has existed that there may be something more, and some have ventured to believe that the dumb animals have spirits that will live again.

Let us go back again to the place of beginning. It is said that animals have no language. But are we quite sure of that? They do call for each other,—the parent for the young, and the young for the parent—and they recognize each other's voice among many others. They They make plaintive sounds, and sounds for distress and rejoicing. What at least answers the purpose of language so far may go farther.

Animals remember. They do not forget their homes; and some animals do not forget that a neighbor has good provisions or good feed beyond the fence.

They remember their masters with good or ill feelings as the case may be. Having been trained to work, they remember how to do it, and do not need the same training every day. They sometimes have a grudge against a person, and manifest it on various occasions.

The mind remembers, wills and reasons. It determines to do a thing for a reason. Do brute animals *will* to do or not to do anything? I have seen a balky horse that evidently willed not to draw an empty wagon, and a few mornings ago I saw the sinch of a saddle tightly drawn on a mustang when I was satisfied, from his uneasy appearance, that he was meditating something, so I stopped to witness a scene. The man who was about to ride, or thought he was, led him around and finally leaped into the saddle. That which the horse had evidently meditated before he soon put into execution, and began to take positions and to change them so rapidly that the rider was compelled to take one in a ditch.

I once saw a cow, which had been left in the coral by the others, go out, walk down to the main road, go up in one direction a little way, stop and stand still a few moments, as if deliberating, then turn and go in the opposite direction. The acts had all the appearance of willing and reasoning. We cannot certainly say that dumb animals do or do not reason, but it is admitted by all that the workings of instinct resemble reason, and many who examine this matter cautiously ask, Do not the brutes give evidence of something more than reason?

I had a shepherd dog that, when I would say to him "The cattle are around," would immediately look in all directions for them. I sent him one day to drive the cattle up the hill-side. He did it well, then stopped and looked at me for further orders. He was too far off to speak to, so I motioned him further on. He instantly obeyed, drove them further, then looked to me, as much as to say "Will that do?" I beckoned him to me, when he came at his utmost speed, and on reaching me seemed much delighted that he had been able to serve me. A child could not have done better.

Many things that that dog did savored of reason. I never allowed him to go away from home with me, though he accompanied me as much as he pleased about the farm. I used to go about the place very much in hot weather without a coat, but always put it on when going to a neighbor's, or any distance. I finally noticed that my dog never presumed to follow me toward the road when I had my coat on, though he would look very wistfully. Must we set all this down to instinct, and say that there was no reasoning about it?

I had a horse that used to untie his halter when he pleased. I have tied three notes, sat down at his side, and seen him go right to work and untie it in as many minutes. It was only by taking a deal of pains every time I tied, that he seemingly *concluded* to give up the trial. Very many facts may be given concerning animals that indicate thinking and reasoning.

It is urged as another difference between animals and men that animals make no improvement; that birds, for instance, build no better nests now than when they begun to build them. To this it may be replied that each kind of bird knew how to make a first-class nest at the beginning. To deny this is an imputation against its Creator who taught them. If the nest was just the thing at first, then there was no need of improvement, and so of other animals. If the ostrich could cover up its eggs in the sand and have them hatched, there has been no need of its inventing an elaborate nest and then sitting upon them like a hen.

The animals resort to many contrivances to obtain food when they must. Hogs that once learned that a neighbor had a delectable field, used all sorts of strategy to get into it.

One reason given for the supposition that animals live again is, that they appear to have spirits, and that it seems reasonable that they should be immortal.

Another reason given why animals should be immortal, and particularly the domestic animals, is on the score of compensation. It is thought that those animals that are over-worked, ill-fed, or abused in any way during their short lives, should have another life which might be a happy one. They suppose that a benevolent Creator would give the abused animal an opportunity for a better life.

Finally, it would seem that no valid reason can be given why they should not live again.

If they are to live again, would not many men dread to meet the animals they have over-worked or abused in any way, when each may be supposed to remember all these things? I think that very many might wish that animals were not immortal, but there is doubtless a far greater number who would like to believe that the faithful animal that has served them might be happy in another life. One thing is certain, animals know the difference between kindness and cruelty, and, should they exist hereafter, will our memory and theirs reproach or applaud us?

The Vineyard.

Theory of Causes of Death of Grape Vines.

THE Napa *Register* offers the following:

A grape-grower with whom we conversed the other day advanced a theory and made some suggestions in regard to the decay and death of vineyards which are worthy of notice, and which may be of value to those interested in grape-growing. It is his belief that the damage done to vines by the phylloxera is not so great as is generally supposed, and that the chief cause of the death of grape vines is the severe pruning to which they are subjected annually, and to the profuse use of sulphur, which is used to destroy the mildew. As regards the pruning, he thinks that instead of setting the vines only eight feet apart and keeping them pruned down almost to a mere stump, it would be better to set them sixteen feet apart and let them run up to a hight of several feet (so high in fact that a man or a horse might walk under the branches), and to make the "head" of the vine at this hight, the same as it is now made near the ground. Cutting off the large branches and keeping the main vine stunted, makes it less healthy and vigorous and more liable to fall a prey to insects and decay. This theory is plausible and seems to be founded in reason. If the vines were allowed to grow larger, they would naturally be healthier, more productive, and longer-lived than at present. If only half as many vines were planted to the acre, it would be easier to care for them and to gather the fruit. If the vines were set out and pruned according to this plan, the gentleman who makes the suggestion thinks that we might as well have mammoth vineyards as an occasional mammoth vine.

The use of sulphur is believed to be injurious to grape vines. It is said to be sure death to gooseberries, and the inference is natural that it may be bad for grape vines. It is put upon the vines once or twice a year to prevent mildew, and falling upon the ground year after, a large quantity of sulphur becomes incorporated with the soil and has a blighting influence upon the vine. Some other means of destroying the mildew is believed to be necessary, in order to save the vines. These suggestions come from a man of considerable experience in the grape business, and are worthy of the investigation of others who have vineyards.

THE NEW PHYLLOXERA REMEDY.—*La Nature*, in a late review of the researches of M. Dumas relative to the practical efficiency of the alkaline sulpho-carbonates as destroyers of the phylloxera, affords us the following information upon the philosophy of the operation of this class of salts: The sulpho-carbonates of the alkalies are produced by calcining their respective sulphates with caabon, by which the mono-sulphide is produced, and agitating a concentrated aqueous solution of this carbon di-sulphide. The sulpho-carbonates obtained as here described, are free from disagreeable odor, are not dangerous to handle, are non-inflammable and comparatively stable. In the presence of acids, however, even of the weakest, and notably when acted upon by the carbonic acid, of which a moist, arable soil invariable contains a certain quantity, the sulpho-carbonate are decomposed into carbonates, with the liberation of carbon di-sulphide and sulphuretted hydrogen, both of which, and especially the first, are known to be highly efficient insecticides. It has been found that it is not only necessary to destroy the insects upon the vines and roots, but likewise to poison the earth in the vicinity of the same, and render it uninhabitable by them. For this purpose the sulpho-carbonate seem to be admirably adapted, inasmuch as, by their tardy decomposition, they furnish a slow but constant supply of the poisonous gasses for some days. Experiments have shown that 1,442 grains of the sulpho-carbonate of potassa will extermiate the insects from 198 to 284 cubic feet of earth, killing not only the phylloxera, but, likewise, the larvæ of larger insects. To apply the remedy, it is recommended to remove the earth from the foot of the vine about a foot deep and sixteen inches broad, into which is to be poured five or six quarts of water mixed with six or eight quarts of the sulpho-carbonate solution at 40° B. When the liquid is well absorbed the hole is closed, and the same process gone through on another vine. By following this method the penetration of the solution to the deepest roots is insured. Another method of application proposed by M. Dumas is to mix the sulpho-carbonate with twice its weight of slacked lime, and to strew the powder thus obtained upon the soil wherever required.

PHYLLOXERA.—August Mann, an experienced viniculturist at Big Oak Flat, Tuolumne county, sends to the *Chronicle* the following remedy for vines affected by the phylloxera, we give it for what it is worth: The phylloxera deposits its eggs on the bark next to the trunk of the vine. Rub off all the loose outside bark, gather and burn it, then take hard wood ashes, 20 pcands; strong salt, 1 pound; common soap dissolved in water, 1 pound. Put all in a boiler, and five gallons of water, and boil ten minutes; stir in the meantime; when cold apply it with a brush all over the vines, except on the wood of last year's growth, in the same manner as trees are whitewashed. This must be done before the buds open, so as to destroy the eggs before they hatch. My vines have been affected for years by the phylloxera, particularly the foreign vines. I have tried many different things to destroy them without success.

In the Spring of 1873 my vines showed all the signs of dying out. The grapes, immediately after the blossom, dried up, and the leai had a lifeless appearance. I then tried my remedy on a patch of Affenthaler vines which were the most affected, and to my great joy little leaves came out again. Satisfied then that I had discovered the right cure, I next spring applied it on all my vines before the buds opened, and as I expected the vines came out full of life and vigor, with large dark green leaves. I succeeded in destroying the leaf louse, and consequently the root louse, too, as the former is the producer of the latter. Those who try my remedy will in a short time from now, find out the truth of this statement.

Stated Displays at the International Exhibition.

The following stated displays, under their respective dates, will be held during the International Exhibition. Applications for entry may be now made, on forms which will be supplied by the Chief of Bureau:

AGRICULTURAL PRODUCTS.

Pomological products and vegetables, May 16th to 24th.

Strawberries, June 7th to 15th.

Early grass butter and cheese, June 13th to 17th.

Early summer vegetables, June 20th to 24th.

Honey, June 20th to 24th.

Raspberries and blackberries, July 3d to 8th.

Southern pomological products, July 18th to 22d.

Melons, August 22d to 26th.

Peaches, September 4th to 9th.

Northern pomological products, September 11th to 16th.

Autumn vegetables, September 19th to 23d.

Cereals, September 25th to 30th.

Potatoes and feeding roots, October 2d to 7th.

Autumn butter and cheese, October 17th to 21st.

Nuts, October 23d to November 1st.

Autumn honey and wax, October 23d to November 1st.

FIELD TRIALS.

Mowing machines, tedders, and hay rakes, June 15th to 30th.

Reaping machines, July 5th to 15th.

LIVE STOCK.

Horses, September 1st to 14th.

Dogs, September 1st to 8th.

Neat cattle, September 21st to October 4th.

Sheep, October 10th to 18th.

Swine, October 10th to 18th.

Poultry, October 27th to November 6th.

The above dates may be favorable for the assembling in Philadelphia of Societies and associations interested in the specialties above enumerated.

The right to amend or annul this circular is reserved.

A. T. GOSHORN,
Director-General.

BURNET LANDRETH,
Chief of Bureau of Agriculture.

Philadelphia, 1876.

Read our statement of principles on page 85.

Stock Breeder.

A FAIR DISCRIMINATION.

Fine Stock vs. the Pool-Selling Ring at Fairs.

COL. COLEMAN YOUNGER, of San Jose, a gentleman who has had a great deal to do with State and county fairs, and who knows the feeling of the people upon this subject, and understands the various games and manipulations of the horse-racers themselves as well as any other man, thus talks before the Short-horn Breeders' Association, and his sentiments are approved:

The cattle interest of this State needs fostering, and no one can do it to better advantage than the Stock Breeders' Association. The State Fair is intended to foster all our industries, and the District and County Fairs are expected to do the same in a local point of view, equally in proportion to their true worth. We ask the question, do the managers of fairs carry out this idea? In some cases we think they come far short of it, and there should be a full and frre discussion by this convention on that subject, and to give an expression to your views as to how fairs should be conducted, and especially so in reference to cattle. When any one industry has more than its due proportion of interest given to it, in money or time, all others suffer in proportion. If, for instance, cattle were to receive two-thirds of all moneys appropriated for premiums, it would be manifestly unjust to all other interests. Now, it is a fact that the managers of fairs usually give at least two-thirds of all moneys appropriated for premiums to the speed programme. Is this just or necessary to foster the industries of the State? And this is especially true of the State Fair. There were over $20,000 offered for premiums by the Board of Managers of the State Fair for the year 1875; and for the year 1874 there were given for speed purposes over $16,000 less the 10 per cent. entrance fee; the cattle premium was under $2,000. Is there any good reason why this difference should be made? Is the speed of the horse of so much more value than all other stock? Well, if so, give us the evidence. What is it in? Does that quality of the horse feed or clothe or furnish more of the necessaries or comforts of life to the people than all other stock? Our boys would scout such an idea. Then where does this superior value come in? Compare the value of the speed of the horse with the beef and dairy interest, the mutton and wool interest, the farming and manufacturing interest. Well, there is really not enough value in it to make the comparison. Separate the thoroughbred horse, either for running or trotting, and they would not be missed in counting the balance. But it is contended that the thoroughbred horse stands at the head of the list for speed. Grant it; but does he fill any other station to much advantage? I think not. Then what is there in him that $16,000 can be set apart for him during a single fair? There must be some good reason for this course. Does it arise from the vast fortunes that are made by farmers breeding them for speed? If so, who are they? Where one man has done well, thousands have been wrecked. I ask the question, what has given the race horse the great value that some place upon him? There is but one answer to the question: that his value is estimated in proportion to the amount of money that can be made out of him on the course. Then, if fortunes are made by his speed, is it the farming portion that do it? I think not. He has not the time, and but few have the disposition to embark in this mode of making fortunes. Then it is left at last to a few breeders and that other class of gentlemen who are fond of turf sports to make it popular. But we are told that the speed of the horse is grand and exciting, and commands the admiration of the world. Well, admit it. But, we ask, is it the speed alone we admire, or is it the vast sums of money that are staked on them that gives this morbid interest? To illustrate this idea: Was it the $30,000 put up by the San Francisco club that created the excitement, or the noted horses entered for the contest, that gave such state and national interest as to cause 30,000 persons to visit the course to see the contest at such enormous cost? Suppose these same horses had contended for a purse of $100, would 5,000 persons have visited the course to see it at the same rate of expense? I think not. If this is true, then the vast amount of money staked upon the result had more to do in producing the excitement than the horses did. The high estimate of speed is purely speculative, and that speculative interest is enhanced by the new and ingenious mode of investing on the result of all contests of speed, either of running or trotting. The managers of this new mode know from the percentage they charge that in time they have the lion's share, and it is to their interest to multiply these contests, which they take great interest in doing. Their percentage being enormous, they can afford to pay large sums for the privilege of furnishing a box for the people to deposit their money in. This new mode of investing on the result of speed has done much to bring these noble contests into disrepute and to lower it to a species of exciting and fascinating gambling. It is said men will gamble, and this is the most decent mode of doing it. Well, suppose it is; is that any reason for allowing them to outrage all our fairs? Is it commendable to make our fairs accessory to the carrying on of this dangerous and seductive vice? But the question arises, can managers of fairs afford, for the sake of money, to mold public sentiment against good morals to such an extent that fairs, as now managed, are made the most fascinating gambling places? Is this the result of fairs? Was it ever contemplated that this should be a prominent feature of fairs? Is this new mode of gambling any part of the industries of the State? Does it add any wealth to the State? If not, then why give it the fostering hand of an agricultural society? To say we cannot hold fairs without the aid of pool selling, is an insult to the intelligence of the people. It has been tolerated like Chinese immigration; but from indications the days of both institutions are numbered. We do not expect to control this institution for the present, for we know the powerful and active influences that are brought to bear to force it upon the public. If it is to be a state institution we propose to limit it to the course. We enter our protest against its being permitted at fairs. It is not one of the industries, and has no claim for public patronage. To allow it is in violation of the plain provisions of the law creating the State Fair. We have no desire to detract one jot or tittle from that noble animal, the horse; but we do object to the enormous appropriations that are given for speed, and the time that is set apart for it. There is no justice nor justification in the distribution of the money as now practiced, and we propose to insist on the managers of fairs making a more liberal adjustment among the great industries of the State that need and should be fostered by the State, and also by the institutions chartered by her for that purpose. We think our demands are just and should be considered. We know that millions are fed from day to day with our beef, mutton, pork and dairy produce, and that nothing can be adopted to take their place. The produce of the cow enters more largely into the consumption as well as the luxuries of the human family than perhaps any other article of food, and this is especially true of the farming community. This is only a part of the benefits. Take the wool, hides and offal, and the comforts and luxuries are continued until it ramifies every relation and condition of life. Now, taking this view of the subject, are we not justified in asking of the managers of fairs to give more consideration to the exhibition in these departments, as they have a value attached to them that cannot be computed? They should relieve us of many of the burdens and lessen our expenses as far as consistent.

THE AUCTION SALE OF FINE STOCK.

As this journal, for last month, went to press too early to allow of an account of the late cattle sales held at Sacramento under the auspices of the Short-horn Breeders' Association of California, we now give a review of the matter as made by the agricultural editor of the *Record-Union*, approved by parties we have seen who attended the sales. Probably yearly sales held in some stated place, the stock to be sold at private bargains, would result best for both buyers and sellers.

The sale of Short-horns that took place in this city on Thursday last fell far short of that success which its promoters anticipated for it. Breeders of these cattle have been meeting with very satisfactory success in the disposal of their surplus stock at private sale for a number of years past, and they had reason to believe that sufficient interest had been created in the public to sustain a good public sale. The experience of Thursday, however, demonstrates the contrary of this supposition. There is a growing disposition on the part of stock raisers to cross up their cattle with thoroughbred Short-horns. The dairymen of the State, at the present time more than at any other period in the history of the State, are buying thoroughbred bulls to grade up their cows, and there are more men of means and of lands stocking their farms with good thoroughbred cattle at the present time than ever before. Farmers generally are acting upon the axiom that good stock pays better than poor, and families in towns and cities who keep but one cow to supply them with milk, are more than ever inclined to buy higher bred and higher priced cows. These statements are all true, and yet the sale on Thursday under the Stock Breeders' Association, which was intended to give all these different classes of people an opportunity of supplying their wants, was poorly attended, and more poorly sustained by bidding. In the number of cattle sold and prices obtained, the sale was a failure. As an effort of the Association to wake up a greater interest in the breeding of fine stock, it was a greater failure probably than in any other respect. This was the second sale under the auspices of the Association, and both fell far short of anticipations, and far short of what they ought to have been. The causes of these failures constitute a puzzle to many of the breeders, and they are disposed to feel disheartened or discouraged in their efforts in this direction. On the contrary we think the trouble is easily explained, and that there is no real cause for discouragement. In the first place, such sales are a new thing to this State, and the people, even those who want to buy, feel a sort of diffidence in their own judgment, which makes them shy bidders. They would go the farm of the breeder and pay fifty per cent. more for an animal than they could be induced to bid for such an animal as such a public sale. To overcome this feeling, the Association have but to keep up the annual sales, and in a few years all will be changed in this respect. The public sales will become the popular resort of buyers, just as they have become in England and the Atlantic States, and the best prices will be obtained at them and the sales will have their intended effect in waking up and sustaining the public interest in good stock. Another special reason for the shyness of bidders is found in the fact that there had gone abroad the impression that the breeders had hit upon the public sales as a means of getting rid of their poorer class of animals, such as they could not dispose of at private sale. This suspicion was confirmed by the appearance of the animals offered. It is in the spring of the year, and the stock, however well kept, does not look as well as in the fall, when the public have been in the habit of seeing it at our State and county fairs. They were then prepared specially to show, while now they are just shedding, or have not yet begun to shed their old coats. They are comparatively thin in flesh and rough and languid. Buyers did not take these facts sufficiently into account. Time and continued sales conducted with honor will correct all these things. The sale on Thursday was conducted in the most honorable and open-handed manner, and all who attended became fully convinced of this fact, and this conviction will have a decided effect in favor of future success. The sales made at private bargains were much more favorable as to prices than those made by public auction, and a number of the animals placed in the catalogue did not make their appearance on the ground because they had been disposed of before the day of sale at more than fifty per cent. more than they would have brought under the hammer.

Pisciculture.

How to Take Salmon Trout.

EVERY year since 1872 we have been distributing salmon trout fry in many of our inland lakes. Those deposited in 1872-3 will be large enough to catch the next coming season, and there are but few people who know how to take them. I will give some hints on the different ways they are taken. They are taken with silver and brass spoon hooks, by leading the line so that the spoon runs near the bottom. But they are taken sometimes at the top of the water, and sometimes half way down from the surface, and by trolling with three lines at one time—one at the surface, one half-way down, and one near the bottom.

Another way is to anchor a buoy out in deep water and cut fish in pieces, varying in size from a hickory nut to a butter nut, and scattering the pieces around the buoy for some days; then anchor your boat to the buoy, using a piece of the same kind of bait on your

hook that you had been in the habit of scattering around your buoy; fish near the bottom, and give it a little motion by giving your line short jerks. The buoy should not be baited the day you go fishing.

Another way is to have a rod and reel and four or five hundred feet of fine, strong line, and if the water is deep put a lead sinker weighing three quarters of a pound on the end of your line, and tie a single gut leader twelve feet long on the main line, twelve feet above the sinker. For hooks, you should use nine No. 6 Limerick hooks, tied three together, back to back, so that they look like a three-pronged grapple. Tie them on a single gut leader, about two and a half inches apart, and you have a gang of hooks five inches long. Put two very small brass swivels on your leader. Use the kind of small fish for bait that the trout are used to eating in your lake. Hook one of the upper hooks through the under and upper jaw so that his mouth will be closed. Then hook one of the lower hooks through the back near the tail in such a manner that it will give the fish a curve and will turn around like a trolling-spoon when it is drawn through the water. The most successful fishermen use three of this same kind of rigs in one boat. They fish one rig near the top with a light sinker, say four ounces, and one about half-way down with an eight-ounce sinker, and the twelve-ounce sinker near the bottom. This is the most successful rig I have ever used. The boat should be rowed very slowly, so that you can feel the bottom with the heavy sinker nearly every time you raise it up and let it down. The bait should be raised up and down by a gentle motion; set the other lines one on each side of the boat, and they will take care of themselves. Live fish should be used for bait. Some use but eight hooks, one hook for the upper to hook through the minnow's mouth, and one to hook through the back near the tail, and two sets of three each between the two single hooks, tied about one and a half inches apart. Be careful and keep your minnow looking as natural as possible. Don't rub any more scales off than you can help. When you let your line out, your boat should be in motion to keep your bait from twisting around the main line.—*Seth Green.*

An Essay on Fish.—Fish may be divided into classes—codfish and fresh fish. The propriety of dividing them into classes will be at once apparent when we reflect that they are usually found in schools.

The mackerel is not exactly a codfish; but he comes so much nearer being a codfish than a fresh fish that he is for the present dealt with the former.

Fish exist in sizes to suit the purchaser, from minnows to whales—which are not fish, strictly speaking. Neither is the alligator a fish; but if we attempt to tell what are not fish, this article will far exceed its intended limits.

The herring is not absolutely a fish; he is a suggestion of departed fish. But the strongest suggestions of departed fish are smelt. The herring sustains the same relation to the finny tribe as the Egyptian mummy to the human race.

Fish are caught by measure and sold by weight—that is they are caught by the gill and sold by the pound. But they are sometimes caught by weight—till you get a bite.

Contentment is the chief respite to the successful fisherman.

Surveyors are apt to be good fishermen, because their lines and angles are apt to be all right.

The mermaid and fishwoman may also be mentioned in this connection. The former is a good illustration of what is meant by the ideal, and the latter as fitly represents the real.

Many land animals are reproduced in the sea. Thus we have the dog-fish, the cat-fish, sea-lions and sea-horses, but no sea-mules. None of the above have hind legs, and any manner of mule without hind legs would be a conspicuous failure.

It may not be out of place to mention Jonah in this connection. He was not a fish, but was once included among the inhabitants of the deep. There has been considerable dispute as to the name of the fish that swallowed the gentleman above-mentioned, some persons arguing that the throat of a whale is not large enough to swallow a man. This objection seems to be inconsequential.

Jonah might have been made in a smaller mould than other men. Moreover, it is certain that he was cast over before being swallowed—cast over the rail of the vessel.

There has been much speculation also as to the cause of Jonah's expulsion from the whale's interior, but the theory most generally accepted is that he soured on the whale's stomach.

He was very fortunate in reaching the land, since he had no pilot. If he had taken a pilot with him into the stomach of the whale he would doubtless have selected Pauncheous Pilate as the proper man.

Jonah was the first man who retired from the Department of the Interior, and Delano was the last one.

But we digress. Let us return to our fish.

The codfish is the great source of all salt. In this respect Lot's wife was nowhere; however it would be well to "remember Lot's wife."

The saline qualities of the codfish permeate and percolate the vasty deep, and make the ocean as salt as himself. Weighed in his own scales, he is found wanting—wanting considerable freshening. He is by nature quite social, his principal recreation being balls—codfish balls.

The codfish was worshipped by the Greeks; but he is only half as well treated by the inhabitants of Cape Cod—he is simply shipped. Hence the difference between the Greeks and the inhabitants of Cape Cod.

Small fish are usually harmless, but parents can't be too careful about permitting their children to play where large fish abound, as it is an established fact that the big fish frequently eat up the little ones.

The jelly fish is, perhaps, the best understood of all the finny tribe, because, being translucent, it is easy to see through him.

The greatest number of fish is eaten on Friday, and the next greatest number on Saturday, because those that are left over are warmed up for Saturday's breakfast.

Argumentative persons are fond of stating that it is grammatical to say that the five loaves and three fishes were ate, since five and three were always eight. They should be treated with silent contempt.

Fish are provided with air bladders, so that they can rise from the depths of the sea by simply filling these bladders with air. If any one is disposed to ask where they get the air for such inflation, let him understand in advance that this article is not intended for the solution of petty conundrums.

There are many interesting rumors about fish which might be mentioned, but the foregoing facts may be considered as of-fish-al.—*Detroit Free Press.*

A Large Lobster Pond.—Among the accessories of the market of Paris is one of the most curious establishments in the world—the great fish pond or reservoir of Roscoff, in the department of Finisterre, on the coast of Brittany. It is designed especially for lobsters, and for the supply of the Paris market with that crustaceous luxury. It has proved so plentiful in its results, however, as to afford occasional supplies to the markets of Belgium, Russia and Germany. It is an immense basin, some 1,600, or 1,800 feet in circumference, formed by solid walls of masonry, in which the waters of the sea are maintained at a uniform hight, with iron gates so constructed that the imprisoned lobsters cannot make their escape. Operations were commenced on the 4th of July last, when about 1,500 lobsters were consigned to hopeless captivity in the basin, and the stock is reinforced with about the same number every week by fishing boats engaged exclusively in the trade, which bring their captives, alive and amid all the horrors of the middle passage, to replenish the great slave bond. This is now estimated to contain about 30,000 lobsters, besides an equal number of mullets and fish of other species, which are enticed into the trap by the flowing tide, but, after having attained certain dimensions, cannot escape. Such a maride animal population necessitates, of course, a large alimentation, which is supplied by conger eels and dogfish, for which lobsters have a decidedly epicurean taste. The lobster is voracious at all times, but in regard to these luxuries his instinctive ravenous appetite carries him beyond the bounds of reason and leads to intestine feuds and desperate wars of conquest. So frequent is this carnage that lobsters in a wounded and disabled state are often found on the surface of the water. These are taken and sold in the immediate neighborhood, as they could not endure a long journey in a healthy condition. So successful has this experiment proved that measures are in progress for extending the idea to other desirable fish with which the shores of Brittany abound.

The clam is an intelligent insect. The legislature of one of the Western States once debated the question: "Which has the most intelligence, the clam or the codfish?" The weight of the argument was in favor of the clam, because it was proved that it had sense enough to keep its mouth shut when other people were talking, which was more than most civilized people ever do.

Horticulture.

Notes on Orange Culture in Southern Europe.

IMPRESSED by the growing importance of the culture of the orange to this county and State, and especially desiring in my own interest to study its practical workings abroad, I made in October and November last a short visit to those portions of Italy, Sicily and Southern France most noted for its culture, and propose giving here, briefly, a general summary of the observations made and information gained from all accessible sources during my visit, hoping that my friends of this State may derive some benefits from the result of my investigations.

WHERE CULTIVATED.

The shores of the Mediterranean, from about Nice to Genoa, properly known as the "Riviera," sheltered from the North by the Appenine Range, and with a sunny exposure on the Mediterranean, are rapidly increasing the culture of the orange and lemon, particularly the latter, the product of which has doubled within the last twenty years, and has gained one third in the past six years; its product being equal to the estimated crop of Florida—20,000,000.

To the north of Genoa there is at Lake de la Garde, in Northern Italy, under the shelter of the Alps, a sort of hot house culture of the orange, deserving mention here as a curiosity in its production for commercial purposes. In a space but little over twelve acres some 30,000 trees are cultivated in what is called *compote*, being thickly planted in terraces, rising closely one above the other in what might be called an amphitheatre, protected by boards and glass in winter, and this is at a cost of about $1,600,000 and yielding $77,000 per annum. I found also at Isola Bella on Lake Maggiore a fine orange grove growing on soil, bought to cover its rocks, from the main land, also sheltered in winter; but neither deserves serious mention as indicating the country of the orange.

Proceeding down the coast from Genoa, after leaving the protection of the mountains, no oranges are raised for commerce until Naples is reached, and here, and under the Vesuvian range at Sorrento, with its vast groves, and stretching along to Reggio, famous for the cultivation of bergamot, the production is on a large scale.

But in Sicily the production of oranges and lemons is carried on on the most extensive and elaborate scale; the regions of which Palermo and Messina are the ports, taking the lead with rapidly increasing volume. The province of Palermo, in 1854, had 11,165 acres of orange and lemon groves, producing $3,250,000; in 1874 there were 55,800 acres, producing $16,000,000!

The report from Sicily, in 1875, of oranges and lemons was 75,000 tons. In 1776 Messina exported 30,000 cases of lemons and 3,000 cases oranges, valued at $53,000; in 1874 Messina exported 80,000 cases of oranges and 300,000 cases of lemons, valued at $2,500,000. Its exports to America from 1862 to 1872 were 3,374,500 cases of oranges and 1,102,100 cases of lemons. In 1871-2 the exports were 521,000 boxes of oranges and 187,000 boxes of lemons to this country. The annual export of St. Michaels (Azores) to England exceeds 600,000 cases.

The lemon is also exported in other forms from Sicily. In essential oil, Messina alone exported, in 1872, 303 tons, value, $1,500,000. The annual exportation of lemon juice from Palermo and Messina is 450 tons; of concentrated lemon juice (60°) 1,500 tons; of cream of tartar 240 tons; citric acid and other products of lemon juice are for the most part manufactured in France and England.

CLIMATE.

The temperature in Southern France and Italy is as low in winter as in Orange county, in fact frequently lower. These countries suffer by periodical severe "cold spells" and traditionally every ten years have severe frost, and every fifty years a disastrous "great freeze." Thus in 1789, 1794, 1811, 1820, 1829, 1837, 1854 were very cold winters; while 1789 and 1820 are marked by the destruction of their orange groves, which, however, rapidly grew up from the roots into bearing again in a few years.

In Sicily there is no frost, though occasionally storms of hail or sleet which do great damage. But all these coun-

tries labor under a disadvantage common to all semi-tropical regions—except our favored peninsula, viz: A summer devoid of rain. For five months irrigation is necessary in the vast majority of their plantations, and whether by steam or horse power or hydraulic works, is very expensive.

SOIL.

The soil most preferred is calcarious clay, and those abounding in alkali are especially prized, but the richest soil does not produce the esteemed fruits. Thus, in the vast and fertile valley of the *Concha*, back of Palerme, covered with oranges of the most luxuriant growth, its products sell for one-third less than those of the same trees planted on Monte Reale, and other hills in sight, of poor calcarious soil, and whose fruits, prized especially for export, by reason of their quality of long-keeping, are known by the mark M (mountain).

The effect of the soil on the quality of the orange is a well recoguized fact, and at Nice, which abounds in beautiful orange groves, it is freely admitted that oranges deteriorate in quality in its inferior soil. The peculiarly delicious fruit of Florida I ascribe mainly to the character of its soil, abounding in that prized substance, alkali, the products of fires which have annually overrun its surface, and in vegetable *debritus* and lime, the product of decomposed shells.

PROPAGATION.

The system universally adopted is to bud the sweet orange upon "sour stock," as we call it. This is obtained by planting the seed of the bitter sweet orange, which is but one of thirty-one varieties cultivated of the *Sphesdric*, or so-called "wild orange." The reason for preferring the sour, or bitter-sweet orange stock to the sweet one, is that it is hardier, less subject to malady than the exotics, more precocious and grows faster. According to very exact observations by the Royal Agricultural College of Sicily, in ten years it gained 50 per cent. in diameter over the latter.

The orange is picked when fully ripe, in March, of the largest size, rotted in the sun, and then washed out, those that float in the water being rejected, as well as all imperfect ones or those wanting in plumpness. They are sowed soon after separation from the orange (the wild orange seed loses quickly the power of germinating); the sweet seed can be kept for years; both can best be preserved in sand; soaking in water is expedient for dry seeds which otherwise would not germinate;) in rich, deep beds, with a warm, sunny exposure about one inch from the surface and are abundantly watered and manured—observing constantly the axiom that warmth and humidity are the essentials of germination—when they are removed to the nursery, great care being taken to preserve the tap as well as the lateral roots. Here again the greatest care is taken to have rich, deep and thoroughly cultivated soil in a sheltered location; they are planted about ten inches apart; watered by irrigation at regular periods, manure and cultivation being frequently applied. In three years from the seed they should attain the necessary growth for budding. This is practical when the tree has reached the size of an inch in diameter about six inches from the ground. All the old groves are budded close to the ground, but experience has proved that protection from the scourge of a wide-spreading disease called the *gamma*, is better secured by making the trunk of the tree hardier stock, consequently the bud is inserted six feet from the ground.

The bud is taken from a bearing tree, and in its year of *full* bearing, not its *off* year. In the spring months trees are budded as well as in the autumn, from August to November. In the first case the trees are topped; in the latter (called dormant bud) no branch is removed till after it has started the following spring. Trees are also propagated by slips made from the suckers or green growth, called *plumet*, which is generally carefully pruned from the tree whenever it appears. Such trees, however, have no tap roots, are short lived, and are not esteemed, though they develop quickly.

Another form of propagation practiced in pleasure gardens is by what is called "Marcotte," which is surrounding a limb previously scarified with a sort of wicker basket filled with earth. After a year the branch is cut off and planted and gives speedy fruit. It also is short lived.

Sweet seedlings are almost invariably denounced by those who cultivate fruit for commerce, as of slower development, (four years longer than budded trees) of uncertain and inferior character of fruit, and by reason of the thorns, which injure it when shaken by the wind. Its size, too, is considered a disadvantage for gathering, and its superior quantity is not regarded as compensating for its inferior quality. Where 100 seedlings fill an acre, 200 budded trees have ample room. Budding, besides, promotes sweetness in the fruit. I have thus seen trees budded on successive buds two or three times to secure a high quality.

PLANTING.

The trees, which generally are from three to six years old, sometimes just ready to bear are planted when vegetation commences—in Italy generally in April. The holes—three feet by three feet in rich soil, from four feet to four and a half feet in depth by the same width, in poorer soil—are generally dug in summer in order to expose the earth to the action of the air. When planted the tree top is cut back to correspond with the dimensions of the roots; the hole is one-third filled with rich, decomposed manure, mixed with the top soil, heaped up in the center, upon which the tree is planted so as to set it deeper in the ground than before. The earth is filled in and left in a saucer shape—depressed around the tree—and plentifully watered. There are various practices as to the tap root. Some cut, some bend, others leave it entire. In a large grove, just planting, which I visited in Sicily, its proprietor an intelligent Englishman, bent the tap root and said that he thus forced the surface roots down—a great object with all cultivators as a security against drought and leaving the top soil free for cultivation.

The base line for planting is generally laid due north and south, in order to give all the trees equally the benefit of the sun. The present generally-received distance between the trees is fifteen feet on the level, twelve feet on the hill sides (although most of the groves I have seen are under twelve, and in some the trees are six feet apart). The modern system of planting, too, is in diamond quincunx, instead of squares, by which plan, with the same space to each tree, eleven per cent. of trees is gained to the acre.

The latter system, too, is to bud the tree only after having been transferred to its place in the grove. The cultivator is generally employed to stir the earth around the trees to the depth of six inches three times a year, and as before said, great importance is attached to keeping down the surface roots.

MANURE.

Until the tree bears, the growth of its wood is promoted by abundant supplies of manure of strong, active character two or three times a year, according to age and soil. When in bearing, manures of slower decomposition are applied from once a year to once in five years according to soil. It is applied to the surface over the roots and especially at their extremities, supposed to be bounded by the extent of the branches. This is turned in the autumn ten or twelve inches deep; liquid manures are applied in the summer when vegetation is most active. Water applied to the roots or over the trees at regular periods of six or eight days, is a great fertilizer by reason of the various salts held in solution, as well as a remedy against drought. Plaster of Paris is sometimes sprinkled over the tops of the trees and is absorbed by the leaves to their benefit.

REMEDIES AGAINST DROUGHT.

With five summer months devoid of rain, the means of obviating the effects of drought are all important to the cultivator. Irrigation is generally practiced and is called wet culture, in contradistinction to dry culture in vogue at Naples, Sorrento, etc. This most expensive method consists in deep trenching. I have seen groves trenched eight and a half feep deep. Constant culture of the soil and sometimes mulching are employed to retain the moisture below the surface. In irrigation, which is universal in Sicily and the Ligurian coast, steam and horse power, and sometimes extensive dydraulic works in sinking and conducting springs from the mountains' depths are employed. Care is taken that the water be of the temperature of the air; it is applied weekly during the dry season, from May in Sicily and June in Northern Italy and France, till September, and at night; in autumn, however, in the morning, the cultivator following a few days after. Conducts of brick or stone are led across the groves (and crossing at right angles) from the reservoirs, and supply the numerous trenches which cover the soil around the trees, in scientific order.

PROTECTION.

The wind is a greater enemy of the orange trees that the frost, in Italy and Sicily, either by their violence or by reason of prejudicial character in itself; and in the location of groves great attention is paid to protecting them, whether by mountains, woods or artificial screening, (walls, plantations, or wooden structures) on those sides whence the most pernicious winds come; (in Italy north and northwest, in Sicily southwest and south-southwest, which is sometimes most destructive with hot blasts from the African coast.) Trees, for this reason, are frequently kept low by early pruning.

The sea-winds, *brina*, are in themselves noxious to the plant, as are the African winds or siroccos, by reason of their heat. The strong *brimate* of 1873 decimated the oranges around Palermo, while the mandarin, which is a hardier fruit, did not suffer. The eucalyptus is now frequently planted on exposed sides of groves as a protection. I am inclined to think, however, that the influence upon the orange tree will prove prejudicial, as, like the ailanthus, it is noxious to many plants. I have seen rows of wild cane planted thickly not only on exposed sides but between every fourth and fifth row of trees. Again, I have seen high frame works of cane erected to break the force of the wind. High walls are sometimes used and the sheltered hillsides are terraced, with immense labor and cost, to their summits to avail of every foot of shelter.

In the Azores, at St. Michaels, I remember to have seen in their *quintas* (orange groves) walls of huge stones, eighteen or twenty feet high, erected for protection from the winds, and planted against these, thickly, the tall and quick-growing *faya* tree, which added thirty or forty feet more elevation for resistance to the strong winds which sweep over the island.

MIXED CULTURE.

The practice is almost universal of occupying the ground between the trees, until the second or third year of bearing, with other cultures; with vegetables, which is preferable when near towns that offer a market; with vines or fruit trees under other circumstances. The peach tree, which lives ten years in Italy, does well planted with the orange, and disappears at the right moment. I have seen accounts of groves to which mixed culture had been applied, when, by the time the trees were in bearing, all the expenses, including the cost of the trees themselves, had been paid by these crops.

PRODUCTS.

A great business is done at Nice and in the neighborhood in orange flowers. The wild trees are cultivated for that purpose, and are superior to the sweet—those of the highland being superior to those of the low. The leaves, too, are an article of commerce. The flowers are gathered all summer, shaken on sheets when dry, and distilled with equal quantities, by measure, of water. The wild orange averages 80 pounds, the sweet 40 pounds per year per tree. I remember one wild tree in Nice yielding 440 pounds of flowers and 4,000 oranges in one year. Two hundred pounds of fresh flowers yield 80 pounds of double and 20 pounds of single orange flower-water, and half a grain of essential oil—*neroli*.

FRUIT.

There are three gatherings: the first in November, when yellowish, and solely for export, and is the dearest; the second in December and January, when half ripe and full yellow color—the cheapest priced; the third in March, when quite ripe and unfit for export—these bring a high price. The sales are made on the trees to merchants, as they stand, or per thousand (merchantable), 1,040 being reckoned as a thousand, and in some districts 360 pounds, or again, the grove is rented for a term of years.

PICKING.

They are picked by breaking the stem, deposited in baskets lined with cloth, then piled upon straw, after the stem has been cut down close to the fruit, and sweated for three days in darkness under cover. They are then culled for market.

MARKET.

The merchant sends his own sorters, and thirty-three per cent. of oranges, sixty-six per cent. of lemons, is the average number of merchantable fruit. All the least imperfections, the abrasion of the skin or loss of stem insure rejection. The oranges are then papered and packed in boxes for transportation to the merchant's warehouse and never sent in bulk. Here they remain a week or two to permit them to develop any latent defects, when they are again inspected and twelve to fifteen per cent. thrown out. They are then assorted according to size, repapered and carefully packed. The baskets, the bins, sorting and papering tables being carefully padded to prevent abrasion of the epidermis. The fruit for export is of three sizes, numbered respectively 25, 30, 42, which represents

the number per layer in each compartment, containing 200, 300, 420 respectively. Lemons are marked 23, 30, 36, 49. Number 36 being the best.

The element of durability enters largely into the price: the *roba fute* (hard skinned) sells for double the *roba flacca* (soft skinned). The average prices of oranges in Palermo, in 1873, were from $3 50 to $5 per thousand.

The paper used in wrapping is a thin tissue manufactured mostly in France. Boxes of beach wood are in great part furnished from Maine, sent out in shooks, with hoop poles to match. by the cargo; the sides and top are each of two pieces. The oranges not fit for export are sold in the local markets, and are packed in puncheons pierced with holes, containing about 1,000, having at the ends and middle abundant layers of paper or straw, and shipped (as our barrels of fruit should be) on their sides.

LEMONS.

The culture of this fruit is assuming enormous proportions in Sicily, being much more profitable than the orange, and supplanting it for that reason. I have seen bearing orange groves topped to receive lemon buds. It yields four crops, comes into quicker and heavier bearing and its uses in arts and medicine—for citric and tartaric acid and essential oil—make it necessarily of greater permanent commercial value than the orange. It is exported every month in the year. Its average yield in Sicily is 1,000 to 1,100—that of the orange 600 to 800. It is relatively higher priced than the latter by reason of the greater durability and medicinal and commercial uses.

A careful estimate, made lately, taking a large number of groves in Sicily under similar conditions of soil, etc., shows that in culture on a large scale the average annual yield of the lemon is $300 per acre, and on a small scale $150; while the orange gives $175 and $90, respectively, from the same area of land, and with the same outlay.

A disease of modern origin, the *gamma*—already adverted to, is causing extensive ravages in Sicily and wide-spread loss and alarm. The disease which first appeared in the Azores in 1832, and which destroyed one-third of the orange groves of St. Michaels, was introduced thence into Portugal in 1875, and has since spread over the orange lands of Europe, making its first appearance in Sicily in 1863, where it has been particularly destructive to the lemon, while the oranges are little affected by it. The characteristic of this dreaded malady is a cracking of the bark near the root from which exudes gum; these cracks extend upwards; the gum-tears (*lagrema*, the Italians call it) trickle down in large quantities, the leaves turn yellow, the bark peels off around the cracks, and the root, too, is finally attacked, and the tree soon succumbs. The production of the tree would appear to be at first stimulated by its presence, an unusually large crop being often an indication of it. A tree once attacked rarely survives. I have seen some where deep incisions, the application of hot iron, etc., at the outset had checked the further development of the disease. In a recent report by the French Consul at Messina to the "Society of Acclimation," of France, of which I am a member, this devastating scourge of the lemon is ascribed to over-stimulation, causing excessive production of the tree. Space will not admit to refer here to other diseases of the *citrus* family and which deserve mention in a special treatise.

In Sicily I was told that the orange and lemon could be raised with a profit at one dollar per thousand, although the present return to the cultivator is about $3; and yet Florida is far superior to Sicily in climate and productiveness of soil, in cheapness of land and vicinity to market. A grove just planted near Palermo, consisting of twenty acres, which I visited, cost its proprietor $20,000, in gold, when ready for planting. His irrigation is by steam power—an English engine, supplied by English coal, watered the ground for five months in the year. Of the products of the grove—the average in fact for the island—but twenty-eight in a hundred were exported, and these enveloped in French paper, and packed in American boxes, shipped in English steamers with thirty-five days' voyage to New York and twenty-five per cent. loss on the voyage; compelled to pay on arrival a duty of twenty per cent. (which the State of Florida is indebted to me for) this sour, half-ripe fruit cannot, I think, long venture to compete with the luscious orange of our own favored land.

I say, therefore, to the Florida orange grower that he is not only certain to supply, to the exclusion of all others, this great market of America, but his superior fruit is destined to supply the tables of the wealthy in Europe, who will pay dearly to obtain this luxury which Europe cannot furnish.—*H. S. Sanford, in Semi-Tropical (Florida).*

Hygienic.

PRACTICAL HEALTH TOPICS---NO. 4.

Rest and Recreation.

BY "JEWELL."

I AM sometimes led to believe that really we Americans don't know the meaning of the word *rest*, we generally take so little of it. Our men are so full of the eternal money making, that they bring the same spirit of intensity into both their rest and enjoyments. Even the women and children of our land are imbued with the same desire of doing or being something for money. Half of our girls, and all our boys, are studying to-day at school, college or workshop that they may some day *get rich*. Perhaps they wish to excel; but why? Only to get a higher start in life and gain the highest places and be richest. So they are urged forward, by teachers and parents, until their brains are overtaxed, and they cannot rest, and hardly play as they should, so the body fails, and before they are men and women they are *old*, with little apparent desire for rest and recreation, because it is too irksome.

Our pleasures are becoming intensely laborious. We need a greater diversity of work and recreation. At picnics I have watched the youths of both sexes engaged in dancing, and verily believe that even the hay-field or wash-tub did not cause the same amount of hard work and perspiration that the mazy dance did. Another thing I noticed, that the very young men and girls that were strong and hearty danced the hardest, and the slim, pale girl was better content to walk and chat with a companion than to exercise the unused muscles as she needed to do. But was the pale girl resting? Not a bit of it. She felt equally weary at night, because she was using the brain when she ought to have been using the muscles and getting blood into them.

The school teacher, editor and minister who use the brain all day cannot rest by reading and studying out of hours. They need quiet to aid digestion, and active exercise to bring the blood from the brain into the extremities and muscles of the body, in order to equalize the blood and give growth to the entire body. And yet they are the very ones who seek quiet enjoyments without regard to health; while the robust farmer's boy and girl, who cultivate the muscles continually, and might really rest by quiet conversation and reading, or attending a lecture, thus cultivating head and body alike, are usually better pleased with merry-making and muscular games and break-down dance—perhaps riding miles after a tedious day's work, to enjoy such a frolic.

Another evil in our way of resting is, that we rob the hours of sleep for most of our recreations. Lectures, concerts, dances, and all but picnics (the latter, by the way, I am glad to see gaining ground in our society ways of late) are in the evening, often continuing until dawn. And even our church revivals have taken up the fashion of late hours, and frequently keep running until near midnight. Surely the reign of *muscular* Christianity will not long last at this rate.

Inactivity is not always rest, and a large majority of our women to-day need the exercise of muscle out of doors in pure air to be strong and healthy. Physicians are beginning to prescribe the "lift cure" and "movement cure" in certain forms of disease, with excellent success. But if our habits of life were more in conformity with nature's laws, so that the brain and muscles were harmoniously developed, and common work was not considered degrading to the well-to-do, all would be healthier and happier. Civilization is a failue when one half of the people are over-worked, with no time for pleasure and rest, and the other half have not enough to do to keep them in health so as to enjoy life, and all are on a mental strain to get or to keep wealth.

The Improved Underwear.

ED. AGRICULTURIST: In the March number of the AGRICULTURIST I saw an advertisement of the combination underwear for ladies and children. Having long hoped and looked for something of the sort, I at once got patterns and made the garments. I therefore feel doubly like recommending them to the ladies everywhere. The patterns seem perfect in every point of view, viz.: cheapness and simplicity of make, and fitting the body easily, at the same time covering it entirely, thus insuring an equal distribution of clothing over the entire surface. I would like to suggest to the patentee that engravings of the garments would greatly add to their sale and attractiveness. The women want to *see* what style of clothing we are going to make in these days of cheap patterns, and hope the "C. C. C. Company" will not only have cuts of both under-suit and outside waist, but will advertise them largely with illustrations to let the ladies of California know what they are like, as well as where they may be obtained, both patterns and made suits.

A MOTHER.

The Cho-cho.

This is a vegetable commonly cultivated in the island of Jamaica, and is evidently the one referred to in the Tampa *Guardian* under the Spanish name of *Chayote*. There are two varieties—the white and the green. The latter is the better of the two, being more delicate. They are about the size of a Cluster cucumber—larger at one end, and slightly tapering off. In the West Indies they are sometimes grown on arbors, but more frequently are planted at the root of a tree. They grow very fast (several feet in a night), and will cover the top of the tree with vines, hanging down all around. The vines bear profusely. One will furnish a peck a day. So common are they in Jamaica that they sell in the country at about 10 cents per peck. They will thrive in any part of the Southern States, for when the vines are killed by frost, they only require to be cut off, and the roots covered with straw, and in the spring they will grow again.

To cook them, first split in half, lengthwise, and boil until quite tender; butter, and sprinkle with black pepper; or mash up like squash and treat in the same way. They are more delicate than squash. Apple-sass can be made from them by the addition of lemon juice and sugar, so that we defy the greatest connoisseur to tell the difference. They should not be planted until they sprout, and then plant with the sprout end slanting downwards, and cover very light; in fact, they hardly require to be covered at all, only placed below the surface, for, if covered, they rot. The vine will last for years, bearing all summer. Those who grow them can have apple pies without apple trees, and no doubt they could be cut up and dried for winter use the same as apples. The cho-cho should not be too old before used. If the finger nail cannot penetrate they are unfit for food, being too tough.—*Florida Agriculturist.*

The Moon's Influence.

The notion that the moon exerts an influence on weather is so deeply rooted that, notwithstanding all the attacks which have been made against it since meteorology has been seriously studied, it continues to retain its hold upon us. And yet there never was a popular superstition more utterly without a basis than this one. If the moon did really possess any power over weather, that power could only be exercised in one of three ways—by reflection of the sun's rays, by attraction, or by emanation. No other form of action is conceivable. Now, as the brightest light of a full moon is never equal in intensity or quantity to that which is reflected toward us by a white cloud on a summer day, it can scarcely be pretended that weather is affected by such a cause, That the moon does exert attraction on us is manifest—we see its working in the tides; but, though it can move water, it is most unlikely that it can do the same to air, for the specific gravity of the atmosphere is so small that there is nothing to be attracted. Laplace, calculated, indeed, that the joint attraction of the sun and moon could not stir the atmosphere at a quicker rate than five miles a day. As for lunar emanations, not a sign of them has ever been discovered. The idea of an influence produced by the phases of the moon is therefore based on no recognizable cause whatever. Furthermore, it is now distinctly shown that no variations at all really occur in weather at the moment of the changes of quarter, any more than at other ordinary times. Since the establishment of meteorological stations all over the earth, it has been proved by millions of observations that there is no simultaneousness whatever between the supposed cause and the supposed effect. The whole story is a fancy and a superstition, which has been handed down to us uncontrolled, and which we have accepted as it came from our forefathers without questioning for a reason.—*Ex.*

Treat laboring man and beast well.

Household Reading.

MOTHER.

A COMPOSITION BY WM. PEARCE.

THE name of mother should be held sacred in the memory of everyone. In the name of mother is embodied something that mortal lips cannot interpret. In the true sense of mother there is found something that gives joy and peace of mind (when tried with the battles of life) that nothing else can give. Show me a man who does not cherish the love and attention paid him by his mother in his childhood days, and I will show you a man who has not a spark of that affection and love that he should have for himself and his fellowman. A man cannot be a friend to himself and disregard the love and affection shown him by a mother. Ah! I fancy I see a man, who has drank deep of dissipation, and who has defied the laws of the land to effect a reformation, dragged from the haunts of vice and sin, and even farther—yea, I may say from the gallows and the drunkard's grave, by the sweet recollections of a mother's love. Her influence has taken hold of the tender cords of the heart when all else had failed. Many there are who do not fully appreciate the present love shown them by their mothers—because that love, to them, now seems small—until separation takes place, either by the solemn messenger of death or by being called to other climes—not till then do they know how to appreciate and value a mother's love. If by death our mother has been taken from us, we should cherish her memory in love, which we do in the following

TO MY MOTHER.

Mother! Sweet Mother! O where canst thou have gone?
Since long have thy children been wandering alone;
Though far we have roamed from our own native shore,
No home have we found like the dear home of yore.

Mother! Sweet Mother, why speakest thou not
To those of thy bosom who forgetst thee not,
Nor look, when in childhood we shared thy dear love,
With blessings invoked from heaven above.

Mother! Sweet Mother! must we plead in vain
To hear but a word from thy loved voice again?
Thou often didst speak of a world bright and fair
Where dread death and sorrow can not enter there.

Mother! Sweet Mother! thy cheeks were all cold,
Thy eyes are closed, which shone with pure love untold,
Thy true longing spirit hast taken its flight
To dwell in the regions of heavenly light.

Mother! Sweet Mother! thou art freed from all strife,
From the cankering cares and burdens of life,
No harsh sound of discord shall e'er grate thy ear,
The sounds of sweet music are now with thee there.

Mother! Sweet Mother! thy lone grave shall be strewn'd
With flowers that emblem thy happy abode;
Brightly will they bloom o'er thy grave and around,
And bold sacred to trust thy dust in the ground.

Mother! Sweet Mother! we may not live in vain
If 'tis in the hope of our meeting again
In the land of the blest, where only is bliss
And unknown are the cares and sorrows of this.

Mother! Sweet Mother! our abode shall be bright
With radiance shining of heaven's own light;
Our breathings shall be of the heavenly air,
And sweetest bliss shall be ours forever there.

SAN JOSE INSTITUTE, May, 1876.

Health first, then comfort and competence.

MUSINGS.

BY MRS. D. C. GUNN.

In the hurry and bustle of life do we ever pause to realize the beauty, the wonder, and the use of the world we live in? Amid all the worry and trouble of this existence, do we ever take breath long enough to account some of the many wonderful results that man has accomplished? Listen! "In the beginning God created the heaven and the earth," and man finds himself upon a globe with its mighty oceans, vast plains, lofty mountains peering into the sky, and dense forests, while above all is the blue vault of heaven with its sun, moon, and starry hosts. For what purpose was this glorious world created? For whom exist the legions that fill the animal kingdom? Beneath the dark water live countless numbers of the finny tribes; over the mountains and plains wander over variety of animal life, from the animalcule too small to be seen by the unassisted eye to the giant monsters that prowl in dark and tangled glens; everywhere the woods and groves are melodious with the music of nature's sweetest songsters, the beautiful birds. For a noble purpose, and for man who was formed "a little lower than the angels," this world exists. Placed upon this earth, ignorant of its resources, helpless in the extreme, how great have been the deeds wrought by the human race! By man's inventions and skill he has traversed the pathless ocean, dividing the world into its great divisions, establishing vast empires; mighty nations, who have builded magnificent cities, and whose power and importance were once the wonder of the world. Though many of these are now in ruins, there comes down through the long vista of ages past an influence upon civilization which is still perceived. Man has linked the past to the present by a long chain of discoveries and inventions that gives to the nineteenth century not only the glory of the past, but a history of its own that will be felt until the end of time.

By the care and industry of man, earth is made to yield her richest productions of the vegetable kingdom. He has penetrated the deep recesses of the earth, bringing forth rare and beautiful gems. By his genius he fills the world with the choicest treasures of poetry, painting, sculpture and music.

"In fields of air he writes his name,
And treads the chambers of the sky."

With all these achievements he is not satisfied, but is still marching upward and onward, In estimating the greatness of human nature, we must remember there are several kinds or orders of greatness, and among them I would place first *moral* superiority, or magnanimity, then *intellectual*, and lastly greatness of *action*, or the accomplishment of some vast perceptible effects. In each of these orders there are many examples of individual greatness, but volumes would not be sufficient to tell of the exploits of the heroes of the world. Every civilized people has contributed to the honor and glory of the past its many glorious examples.

By the side of the bright and glowing record of man's greatness is another one of darker import, blotted with tears of the suffering, with cruel oppressions, bloody wars, and with all the crimes that have blackened the history of the world since its creation. But upon this I will not dwell. It is all sufficient for us to know that from this chaos of human misery Divine Wisdom will bring forth a glorious ending, when all shall be governed by the principles of truth and justice, when charity and love shall go hand-in-hand with strength and power. Goethe says "on every hight there lies repose." When that highest of all hights, goodness, perfect knowledge, and love, is reached, may we not hope that there will be sweet rest and peace for those who have acted well their part in this fitful dream that is called life?

GRANDFATHER'S LETTERS---NO. 9.

MA AND ANGIE WRITE TO INGLEWOOD.

Dear Inglewood: Although we all know by this time who Inglewood is, and in your visits we shall know you by your real name, for your present purpose you can retain that of your choice, the *nom de plume*. Aunt Mary insists on turning over the correspondence to other hands. She says she has found out enough of Inglewood to recommend and invite him as a visitor to the Hill-side Farm. Such is the confidence we always place in Aunt Mary, I cannot but heartily coincide. If your sentiments and principles, on further acquaintance, prove as good as those expressed to Aunt Mary, I shall feel honored by a more intimate acquaintance; and that may lead to a membership of the family—this, however, is a matter for you and my daughter Angie to look to. Friends' and even parent's wishes are not always attended to in these matters. You have seen enough of the world (for you are not like a man in or just out of his teens) to know there is an individuality peculiar to everyone, and it is best to see that individuality under different phases and circumstances to form anything like a correct judgment of it. So I do not extend an invitation to you for a set time, but just drop in as you feel disposed to, and there will be no lack of opportunity to learn something more of Angie, and for a display of your own sentiments and principles. This sudden attachment, falling in love at first sight, as it is called, I am not much in favor of. I know there is such a thing, and occasionally it turns out well, but often the reverse. On the other hand, we sometimes come in contact with those towards whom, at first, we feel quite indifferent, but who, by a continual display of qualities which excite and draw our attention, love, kindness and sympathy, change our indifference to feelings of love and admiration. This is the kind of love and admiration I am in favor of, and which I endeavor to inculcate in others. It grows with our growth and increases with our years, till it may reach that climax that we may anticipate even death itself will not blot out those soul faculties from existence. Such, Mr. Inglewood, may be your faculties and mine, and continued into the next sphere.

Yours, respectfully,
MRS. SARAH MORFATT.

P. S.—*Mr. Inglewood:* In accordance with Aunt Mary's and dear Ma's insisting wishes, I break silence in reference to your note, but only as a postscript to Ma's letter,—you must remember that will be quite enough to begin with—and express my wonder at what you could have seen in me to attract your fancy. When Ma told me your object, I exclaimed, "Why, he is old enough to be my father!" so it was an object with Ma to soften down this disparity of years. What does Mr. Inglewood say to this disparity? I cannot but think it objectionable, though Ma does say there are some decided advantages in it—that remains for you to show in one of your visits.

Since I, also, am out of my teens, I expect not to be treated as a child, but as a woman, and as one who has had the benefit of those who have preceded me in the same line, and who, on this and all other matters, counsels her mother—her dearest friend up earth.

This trio, Aunt Mary, Ma and I, have many a serious conclave in reference to me and my future, I do assure you. On the one hand, warning me how I listen to your fascinating, endearing phraseology; and on the other, how I place myself in a repellant mood. Really, they treat the matter with such serious gravity as sometimes to have a depressing influence on my spirits.

In this commencement of our epistolary correspondence, I have been thus frank, plain and sincere with you, and intend to continue so to the end, with a request that it may be so on your part. If in our personal communications there are excuses for our omissions and commissions of an indiscreet nature, there can be none in our epistolary, for here we can review our thoughts before speeding them off. So, till we hear from you again, we three, Ma, Angie and Aunt Mary, a trio, remain your friends in sincerity. —ANGIE M.

UP-COUNTRY LETTERS---NO. 5.

BY RACHEL A. ELY.

Spring is upon us—charming, joyful spring—with its singing birds, noisy crickets, bursting buds, smiling buttercups, and soft, emerald grass, over which my frail foot steps love to linger, and daily I take my quiet walk to the big, old trees, and stretch my poor limbs upon its soft, velvet bed, in the warm sunshine, and doze, and read, and think, and sleep. Yes, actually, sleep overtakes my brain, and I awake so refreshed that I wish every poor invalid in the universe might feel as I feel, and grow strong as I do, in body and spirit too, for my kind, good hostess is giving me mental health as well as bodily strength. It seems as if a new revelation were unfolding to my eyes, and that God's laws were but just being understood by me. I wonder as I remember, years ago, while I was heedlessly, ignorantly, entering the downward path of disobedience to His laws, from which I suffer today, and have suffered untold agonies, how I could have so blindly fallen, all the time attending divine service each Sabbath, until my health failed entirely and I could not leave the room, when the good pastor came to me, and read and prayed for the soul's health, but not a word for the body's sake, that "living temple" that holds the soul and its aspirations. I begin to see light ahead now, and wonder why our ministers don't take up the good tidings of obedience to God's *physical* laws with the moral and spiritual law combined. Ah! if they could but listen to my brave, kind, little teacher, living such a quiet, domestic life among these mountains, surrounded by her little children and home duties, but doing her duty so bravely and earnestly, surely they would feel as I do that His servants are many, and much scattered among His children, and not always wearing the badge of honor among men because of their fine oratory and brilliant churches. Blessed simplicity of truth and nature! Let me with open eyes behold thy wondrous teachings, and try to obey thy laws, believing as I do that it is only through them that our *bodies* can be strong to do the moral and spiritual work for ourselves and others.

The sick woman at whose house I first made my home is no better; indeed, her doctor has given up the case, and calls

in a friendly way every few days, but after exerting his utmost skill in drugs says nothing more can be done, and leaves her to die! Poor woman! and wise doctor! My hostess has been to offer any aid, and says there is hope while there is life, and cooled her head and gave her a rubbing bath, which was followed by a sleep of an hour. How I do hope that she may recover under my friend's advice and treatment!

HAVE A HOME.

BY ISAAC KINLEY.

Dependence debases. Few minds are able to resist its depressing influence. The tendency of subordination to the will of another is to destroy the sense of self-respect. Personal independence is a tree of rare growth, and even under the most favorable circumstances for its development, is by no means too deeply rooted. Where one stands straight up and looks the world honestly in the face, a thousand

"Bend the supple hinges of the knee
That thrift may follow fawning."

To have no home—to live by courtesy, with the constant feeling that pleasing, not one's own conscience, but the will, and often the corrupt will, of another, is the condition by which one's place is held, not only destroys manliness, but strongly tends to sap the foundation of every other virtue.

Personal independence, if not in itself a virtue of the highest order, is a condition without which other virtues cannot flourish. The meanest thing that crawls is the slave of caste who dares only to think and speak as he is permitted. I would rather burrow in the caves of the earth than subordinate my convictions of duty to those whom accident has placed in superior physical circumstances. Accountable to God, and to Him only, the will of no man should be thrust between ourselves and duty. If this manliness of character can be asserted only at a sacrifice, the cost should teach us to prize it the more highly.

He who holds the title deeds to the land you cultivate, or for the house that shelters you, has no more rightful authority over your conscience than you have over his—has no rights, moral, social or political, which you do not possess. When he attempts to silence your voice or control your vote by other means than an appeal to your reason, treat him as an object beneath you—spurn him from your presence.

Our faculties are God-given, and it is better to go to bed with a hungry belly than with a dwarfed soul. Freedom of action is at once a duty and a privilege, and we have no right, if we would, to surrender it.

But dependence is not a necessity. With a home of only a few acres, one may be free; and with health and frugality an industrious family may, within a few years, buy themselves such a home. Not many acres, indeed, and a costly mansion, but yet a few acres and a humble cottage; and this their industry and taste may soon make a "sweet home."

To the family without a home, I would say, Defer not the day of your deliverance. The children are growing up without the endearments of home. They are forming habits in a state of dependence. You are depriving yourselves of the benefits of "a local habitation and a name."

If you are poor, be not ashamed of your poverty. Do not for a moment feel that you are of any the less consequence on this account, or that you are accountable to other than God for your actions. But save your earnings, curtail your expenses, and buy yourself a home, or the first spot of ground which iswithin your ability to purchase.

Then you may be free, and enjoy the rich moral blessings which a sense of personal independence brings. Plant the fruit-bearing tree and the vine; teach the flowers to cluster around your cottage, and make your few acres smile as a garden. Mingle your voices in songs and in hymns of praise to God. Long in the hearts of the children grown to manhood and womanhood be repeated the pleasant memories, and the old homestead be recurred to as "a thing of beauty, and a joy forever."

And the library—I conjure you not to forget the library. If not familiar with books, go to some reliable friend who is. The honest man whose home is the dwelling of industry, intelligence and virtue may look down on him whose acres are counted by the thousands.

GOVERNING CHILDREN.

BY BUSY BEE.

How hard it is to govern children—and, no doubt, much harder for some than others. It requires a great deal of thought and discipline upon my part to enable me to govern my children properly, and with all, I dare say, I often commit grievous blunders in regard to their management.

I think we should try to make our children love us. Of course, they naturally do; yet there are many little ways of endearing ourselves to them—of making their little lives happy, and the remembrance of their childhood a well-spring of joy all through life. Not, of course, by undue indulgence. That is, perhaps, as bad as undue severity. Nor by simply providing for their physical wants. This, truly, is much, but not all. The little things need more. They have their childish sorrows, which are as poignant to them as a grief to us. A loving word and caress should always be ready to soothe their little troubles and cure their little hurts. After they grow older and leave their home to make their way in the world, if the thought of home is one of fond remembrance, and the love of parents deep and true, it must be impossible for them to go far astray.

Every evening, in order to get the children to go to bed in a happy, contented frame of mind—and, in fact, to get them to go willingly when their bedtime comes—I devote a half hour or so to reading to them, which they enjoy very much, looking forward during the day to the evening's reading. It is very gratifying to give the good-night caress amid happy, contented feelings. We read and talk about the little stories and poems, and really I think I enjoy it as much as they. The Agriculturist furnishes us many an evening's entertainment.

HOW TO MAKE MISCHIEF.

BY MRS. L. W.

Keep your eye on your neighbors. Watch like a spider in its den for an opportunity to pounce upon them. Do not let them stir without watching, or they may do something wrong. To be sure, you may have never known them to do anything bad, but it may be on your own account they have not. Perhaps, if it had not been for your kind care, they would have disgraced themselves long ago. Therefore, do not relax any effort to keep them where they ought to be. Never mind your own business; that can take care of itself. If a man looks over the fence, be suspicious of him. Perhaps he contemplates stealing, one of these dark nights. There is no knowing what queer fancies may have got into his head. If you find symptoms of anyone passing out of the paths of duty, be particular to tell every one else what you see. Circulate such tidings, though it may not benefit yourself or anyone particularly. Do keep something a-going. Silence is a dreadful thing. It is said "there was silence in heaven for the space of half an hour." Don't let such a thing occur on earth. It would be too much for this mundane sphere.

If you wish to cultivate a gossiping, meddling, censorious spirit in your children, be sure when they come home home from church, from a visit, or any other place where you do not accompany them, to ply them with questions concerning what everybody wore, and how everybody looked, and what everybody said or did; and if you find out anything that you can censure, always do it in their hearing. You may rest assured, if you pursue a course of this kind, your dear children will not return to you unladen with intelligence. And rather than what they communicate to you should be uninteresting, they will, by degrees, learn to embellish in such a manner as shall not fail to call forth remarks and expressions of wonder from you. You will, by this course, render the spirit of curiosity, which is so early visible in children, and which, if rightly directed, may be an instrument of enriching and enlarging their minds, a vehicle of mischief which shall serve to narrow and vitiate them.

Home Power.—It is a common saying that "manners make the man;" and there is a second, that "mind makes the man;" but truer than either is a third, that "home makes the man"—for the home training includes not only manner and mind, but character. It is mainly in the home that the heart is opened, the habits are formed, the intellect is awakened, and character moulded for good or for evil.

For that source, be it pure or impure, issue the principles and maxims that govern society. Law itself is but the reflex of the homes. The tiniest bits of opinion sown in the minds of children in private life afterwards issue forth to the world and become its public opinion, for nations are gathered out of nurseries, and they who hold the leading strings of children may even exercise a greater power than those who yield the reins of government.

Growing Old.—How strange our ideas of growing old change as we get on in life! To the girl in her teens the riper maiden of twenty-five seems quite aged. Twenty-two thinks thirty-five an "old thing." Thirty-five dreads forty, but congratulates herself that there may still remain some ground to be possessed in the fifteen years before the half century shall be attained.

But fifty does not by any means give up the battle of life. It feels middle-aged and vigorous, and thinks old age is a long way in the future. Sixty renunciates those who have done great things at three score, and one doubts if Parr, when he was married at one hundred, had at all begun to feel himself an old man. It is the desire of life in us which makes us live so long.

One of the most attractive and valuable publications which reach our table is the California Agriculturist, published monthly at San Jose, at $1 50 per annum.—*Castroville Argus.*

Correspondence.

DEEP VS. SHALLOW CULTURE OF THE SOIL.

BY MECHANIC.

Mr. Editor: In your April number I noticed a letter from Castroville that is quite interesting, yet I respectfully differ with the writer in some of his views, but most heartily endorse his notions of rotation of crops, thorough pulverization of the soil, and, as a general rule, early seeding, especially in dry seasons. However, I would pulverize the soil very deep, and if it was not fertile, raise crops that would warrant manure to fertilize it. In shallow soils, with poor subsoils, the deepening should be gradual, and proceed only as fast as you are able to fertilize it. Some kind of well-fed stock—either hogs or cattle—to convert your corn, barley, peas and straw into manure, is essential to improve poor land. Lime added occasionally, as the manure enables the soil to bear it, will work astonishing results.

The manure, in your dry climate, should be compost, and thoroughly rotted; but manure from poor stock is next to worthless, and will not pay for hauling out, unless it is thoroughly decomposed, as it is liable (in a coarse state) to make the crop suffer with drouth.

"Subscriber" says he is convinced that thorough surface cultivation is best. So am I. But the deeper the better, if thoroughly and correctly done. It is better to cultivate shallow than to turn it up deep and late, and then seed upon the coarse clods. His unsatisfactory experiment of 1870–1 might have been of the latter class. Had the deep-plowed soil he mentions been thoroughly pulverized by summer-fallowing, with two or three plowings and harrowings, and seeded early, the result would probably have been reversed.

The most advanced farmers of England plow deep, and trench plow, and follow the second plow with the subsoil, which gives them the most satisfactory results. Of late years, some have used a heavy stationary steam engine, with wire ropes and pulleys arranged to draw the plows across the field. This mode enables them to till the ground still deeper than before, with better results.

"Subscriber" speaks of the success of farmers in Europe without very deep plowing, yet admits, in the same sentence, that it has paid them to deepen their shallow soil artificially, manure it, etc.; but he must also admit that such farmers come up to the high standard of the most advanced, scientific and practical farming practiced in England. He thinks me in error about my 14-inch plowing—or the amount of the crop, I know not which—but I can assure him there is no error. The old farm was thought to be worn out, but it really was only packed so tight for ten or twelve inches deep that the water and corn roots could not enter it, and in dry weather it cracked as deep, or deeper, than your adobe soils. My friends thought me foolish when I obtained the place, and were still more worried when I kept a man, with a good team, at work nearly all summer preparing sixteen acres for corn the next season; yet they changed their minds when they saw the biggest crop of corn, by nearly 30 bushels, that the Boise Brule bottom land ever produced. The driver's work, board and horse feed, to summer-fallow the land, cost me a trifle over $9 per acre. The

crop netted me, at my storehouse on the river bank, after paying freight to New Orleans and commission, $139 25 per acre, and the result confirms me in my old notion that "whatever is worth doing, is worth doing well."

I am aware that California, as well as our Oregon farmers, think that, owing to the high price of farm labor, they must expend as little work as possible, and "Subscriber" sounded the key-note to his argument when he spoke of the extra power required to plow deep; yet I still think that thorough farming will pay in either State. I would not advise rash or reckless experiment, but would say, Go slow until, by a series of small and careful experiments, you are sure you are right, and then go ahead.

I like the vim in "Subscriber's" letter, and would not give a fig for the contented individual, whether farmer or mechanic,—yet contentment is said to be the main source of happiness, and is supposed by many to be a rare Christian virtue. But give me the man who is always trying, judiciously, to soar to something better—the discontented, restless mind that is trying to make two spears of grass grow where but one grew before, and when he has made the discovery is willing to impart it to others—that's the man for me. He is worthy the honor due to a public benefactor. Yet we all should be cautious about too hasty conclusions from imperfect experiments.

I heard of a new importation from Ireland trying a feather bed by placing a feather upon a rock and reposing thereon. In the morning he condemned feather beds as very hard institutions.

I know of a professor in a medical college who had heard of using medicine hypodermically soon after the discovery was made, but knew not how to use it. Meeting with a case where an anodyne was indicated, the professor poured a quantity of sulphate of morphia into his hand, made a strong solution, and then, with his syringe, administered the dose. The patient went to sleep in spite of all efforts to keep him walking, and never awoke. The professor was loud in condemnation of this valuable discovery; but had he known that a quarter of a grain was a dose, and governed himself accordingly, the result would have beendifferent.

I do not give the latter illustrations to ridicule "Subscriber, but only as a caution against imperfect experiments and hasty conclusions.

Business is too pressing to allow me to write a lengthy argument, or the hundredth part of my observations on the universal success of deep and thorough culture, with rotation of crops, in the different States.

If "Subscriber" will continue his experiments nine, or eighteen years longer, he will have more experience from which to form mature conclusions, and may possibly change his mind.

Salem, Oregon, May, 1876.

California Agriculturist.—We are in receipt of the 4th and 5th numbers of the Cal. Agriculturist and Live Stock Journal, published at San Jose, California. The contents are of the ablest and most interesting character, and the typographical appearance is of the first order. The publication is an honor to San Jose, a credit to the State, and is excelled by but few in the country. The proprietors deserve a liberal patronage from the people of the coast, and we doubt not will receive it. We advise our agricultural readers to subscribe for the Agriculturist.—*Nevada Transcript, May 9.*

Domestic.

The Eater Eaten.

AN ORIENTAL COMIC KITCHEN SONG.

Once on a time, in Ispahan
There reigned a very remarkable man,
Who crammed every day in his gaping maw
A whole stuffed lamb, besides a pilau
Curiously made of peacocks' gizzards,
Scorpions, snails, and tails of lizards;
Oh! wasn't this a deal too bad
Of Rama Brama Amerazad?

He fried an elephant cut in steaks;
He potted two hundred black-ringed snakes;
He stewed a zebra, boiled a boar—
Liked the last, and polished off four;
Scalloped a sea-cow, fried a whale,
Framed a dish from a tiger's tail,
Oh! wasn't this a deal too bad
Of Rama Brama Amerazad?

A regular shark at calves and cows,
He cleared the meadow and gutted the house;
All the week ate fowls in flocks,
Till the farmers tore their hair in shocks.
Ispahan was filled with sheep
Night and day, till never a sleep
The people got—a deal too bad
Of Rama Brama Amerazad!

It was getting serious. Rama now
Looked on men with a thoughtful brow.
If a fat pasha came to dine,
He eyed him gloomily over his wine.
He pinched fat children. Worse and worse,
He even pinched the family nurse!
He'd soon turn cannibal—oh! the bad,
Naughty Rama Amerazad!

At last the rabble grew red-hot mad,
So rapidly Rama went to the bad;
They stormed the palace and killed the k ng—
In a pot he soon was simmering;
They baked him then in a mighty pie;
And didn't they gobble him—oh, my eye!
A very good end for one so bad
As Rama Brama Amerazad.

FAMILIAR TALKS---No. II.

BY SNIP.

I CONGRATULATE you, friend Herring, upon your success with moss and ferns. My experience has been just the opposite. The moss won't stay green, and the ferns do anything but grow and keep fresh. A poor little insignificant-looking leaf comes up, and when it is about an inch high it dies and another comes. What do you suppose is the reason?*

BLIGHT ON ROSE BUSHES.

What shall I do with my rose bushes? They grow well, but the leaves are covered with what seems to be a white mould. Many of the buds do not come to maturity, and there has not been a perfect flower on them since they were set out, more than three years ago. Other roses are growing here that are perfectly healthy.

"A FASHIONABLE WOMAN'S LAMENT"

awoke—well, hardly a sympathetic chord, for I spent to-day three hours ironing a dress (I dare not tell how long I was making it), and when I finished, aching hands, throbbing head and tired feet forced me to resolve that never again would I make a dress "in the fashion," and spend so much time and energy all for—what? I do not know how some women can do so much of such work and do necessary work too. To the majority of women the sewing machine is no help whatever.

CLEANING TIN.

"How bright your boiler looks," said some one to me not long ago, referring to the water boiler that I use instead of a tea-kettle. I had forgotten to wash it in the morning, and just rubbed it off with a dry cloth. I was surprised myself, but since then I have done no scouring on tinware, unless it is burned. I use a cotton cloth, but am not sure but woolen would be better.

*See remarks under City Gardening Department.

DOUGHNUTS.

I have been looking in vain for the receipt for those doughnuts that "Mary Mountain" praised so highly. Why did she not send it for the benefit of the readers of the Agriculturist? Here are two that I think are good. First: one half cup of buttermilk or sour milk, the same of cream and sugar, two eggs, one teaspoonful of soda, salt and spice. Second: one and a half cups of sugar, two tablespoonfulls of butter, too eggs, one quart of flour, three teaspoonfuls of yeast powder, milk enough to roll out without any more flour.

COOKIES.

One cup of sour cream, one cup of sugar, half a teaspoonful of soda, flavor to suit.

CONTRIBUTED RECIPES.

Original, or Such as Have Been Proved Good by Trial.

APPLE CAKE.

Chop rather fine three cups of dried apples and soak over night in two cups of molasses; stew for half an hour; when cold add one cup brown sugar, one cup butter, three eggs, three cups flour, one cup raisins, two teaspoonfuls allspice, two teaspoonfuls cinnamon, one and a half teaspoonfuls cloves, one nutmeg, one teaspoonful of soda, and two of cream of tartar. Citron and currants may be added.

COCOANUT CAKES.

Remove the rind from a cocoanut and grate it; add one pound of white sugar and the white of one egg whipped to a stiff froth; mix with the hands as quickly as possible, and make into small cakes the size of a large walnut and bake on buttered paper placed upon a buttered tin.

COCOANUT CRACKERS.

To one pint of oatmeal add one gill of fresh cocoanut or two-thirds of a gill of desiccated cocoanut, and one gill and two tablespoonfuls of water; roll into one eighth of an inch thick; cut into fancy shapes with cake-cutters, and bake in a very slow oven, so that the will dry out rather than bake.

TAIOCA AND PEACH PUDDING.

To one cup of tapioca add three and a half cups of boiling water, and let it stand half an hour. Mix with it one and a half pints of sliced canned peaches sweetened to taste; ornament the top with fanciful designs in blanched almonds and raisins; bake three-quarters of an hour in a white nappy, covering the top with paper to prevent scorching. Serve cold in the same dish.

JELLIED GRAPE.

Cook one half pint of rice half an hour in three half pints of water; strain three pints of cooked Isabella or Concord grapes; add them to the rice; cook another half hour; sweeten to taste, and serve cold in a glass dish.

COCOANUT BREAD.

To three half pints of Graham flour and three tablespoonfuls of cocoanut, add half a pint of cold water; when well mixed, knead on a board until little flour is left on the board, say fifteen minutes; make into rolls two inches thick and eight long; bake from thirty to forty minutes in a moderate oven; when quite cold, cut and serve in thin slices.

FRUIT BREAD.

Make as above; roll out to the size of a dinner plate and half an inch thick, cover with stoned-dates, blanched raisins and chopped figs, then roll upon itself, fasten the ends, bake one hour, cut into slices when cold.

TO CLEAN GARMENTS.

Wet a sponge in warm water, and squeeze it out till dry; then sponge one place after another until all the garment has been cleansed. All the dust and soil will be absorbed by the sponge. But if the garment is very much soiled, wash the sponge in clean water several times, squeezsng it as dry as possible by wrapping it in a piece of black alpaca. This method of cleansing is more effectual than a hand-brush, and many spots will disappear by the use of pure water.

FISH CHOWDER.

Slice ten potatoes and three onions, the latter very thin; cut four thin slices of pork and fry brown, then lay them in the bottom of the kettle, covering them with a layer of any fresh fish cut in slices; pepper and salt; add a layer of the potatoes and onions, which should be previously well soaked in cold water; now add another layer of the fish, salt and pepper as before, covering this time with a layer of pounded or broken soda-crackers; add another layer of the vegetables, cover with crackers, let it boil briskly a half-hour; add a cup of rich milk and dish.

RHUBARB PIE.

Take off the thin skin, cut the stalks in small pieces, add a little flour, and place it between two covers. When the paste is done remove the top crust and add sugar and butter, mixing them thoroughly with the rhubarb. Put the top crust on again and serve warm. Other seasoning may be added if desired. Rhubarb pies made in this way do not run over and waste their sweetness in the oven,

BORAX FOR WASHING.

The use of borax in Europe for washing is well known, the addition of a large handful of borax, instead of soda, to ten gallons of water being sufficient to save half the quantity of soap ordinarily required. For light fabrics and cambrics a moderate quantity is to be used; but for articles which require to be made stiff a strengthened solution is necessary. Being a neutral salt, it does not affect the texture of linen in the slightest degree; and as it softens the hardest water, it is much used in washing generally.

GINGER PUDDING.

Two eggs, one-half cup of sugar, one-half cup water, one-half cup milk, three teaspoons yeast powder in two cups flour, butter the size of a hen's egg, two teaspoons of ginger. Steam in a covered pudding-dish two hours. to be eaten hot with sauce.

CLAM CHOWDER.

One quart-can of clams, one quart-bowl of raw potatoes pared and cut in slices, one quart-bowl filled with sliced onions, a slice of sweet salt pork as large as your hand cut in strips and fried to a crisp, butter the size of an egg, salt and pepper to taste, three pints of boiling water. Draw off the liquor from the clams and mix it with the above, and in fifteen or twenty minutes add the clams, some crackers or toasted bread, and boil up once and serve.

"Press On."

Press on! You're rusting while you stand;
Inaction will not do:
Take life'f small bundle in your hand,
And budge it briskly through.

Jump over all the "ifs" and "buts;"
There's always some kind hand
To hit life's wagon o'er the ruts,
And poke away the sand.

Boys and Girls.

Trust.

Searching for strawberries ready to eat,
Finding them fragrant and large and sweet,
What do you think I found at my feet,
Deep in the green hill side?
Four young sparrows, the cunning things,
Feathered on back and breast and wings,
Opening their four mouths wide.

Stooping lower to watch my prize,
Watching their motions with eager eyes,
Dropping my berries with glad surprise,
A plaintive sound I heard;
And looking up at the mournful call,
I spied on a branch, near the old stone wall,
The poor little mother bird.

With grief and terror her heart was wrung,
And while to the slender boughs she hung,
She felt that the lives of her birdlings hung,
On a still more slender thread.
"Ah, birdie," I said, "if you only knew
That my heart was tender and warm and true!"
But the thought that I loved her birdlings too
Never entered her small round head.

And so through this world of ours we go,
Bearing our burdens of needless woe,
Many a heart beating heavy and slow
Under its load of care;
But oh! if we only, only knew
That God was tender and warm and true,
And that He loved us through and through,
Our hearts would be lighter than air.

Dot Lambs Mary Haf Got.

Mary haf got a leetle lambs already;
Dose vool vos vite like shnow;
Und efery times dot Mary did vend oud
Dot lambs vent also oud, mit Mary.

Dot lambs dit follow Mary von day of der shchool house,
Also, vich it dit caused dose schillen to schmile oud loud,
Ven dey dit saw dose lambs on der inside of der shschool house.

Und zo dot shchoolmaster dit kick der lambs gwick oud;
Likewise dot lambs dit loat around on der outsoides,
Und dit shoo der flies mit his tail off patiently aloud.

Undil Mary dit come also from dot shchool house ond.

Un den dot lambs din run right avay gwick to Mary,
Und dit make his bet on Mary's arms,
Like he would said, "I doud was scared,
Mary would kept me from all dhroubles enabow."

"Vot vos der reason aboud it, of dot lambs und Mary?"
Dose schillen dit ask it, of dot shchoolmaster;
"Vell, dond you know it, dot Mary lofe dose lambs already?"
Dot shchoolmaster dit said.

"OUR CORNER."

AUNT POLLY is happy to greet her dear nieces and nephews again. Isn't June a real sweet month? May was ushered in with blooming roses and has gone out in fragrance. June, with a brighter sun, and just as many sweet and beautiful flowers, shows also the promise of fruits. Look at the little baby apples and pears hanging among the leaves that almost hide them. The peaches, too, are the color of the leaves, but in another month or two they will begin to show some signs of ripeness. The cherries! Oh, the luscious cherries that little children and birds love so much, are now full ripe, and Oh! so refreshing to eat, and so pretty to look at as they hang down on their long stems. Out in the fields the grass has grown to its full size, and the men are mowing and making the fragrant hay. See the wheat and barley and oats, with full-grown heads, waving in the wind and reflecting the sun so prettily! The hills are turning brown with many colored flowers, and soon will fade to a dry look for the want of rains. So with summer comes beauty; and as ripeness grows the color of wild flowers and green grass fades to a russet brown. Then the fruits of the earth and the grains that feed us all mature, and man and beast and bird eat of the good things and praise the Giver of all good for the blessings that are provided for all of God's creatures.

And now Aunt Polly wants you to read this nice little story that she has selected for you all:

A TALK WITH BERTIE ABOUT THE GRAIN.

"I guess crackers don't grow, do they, auntie?" said Bertie, as he took one in his little chubby hand for his lunch.

"No; the man makes them and puts them in the oven and bakes them as Mary Ann bakes her bread."

"What does the man make them of?"

"He makes them of wheat. Here is some wheat. This grows in a field on a stalk as high as your head, all wrapped in little husks at the top of the stalk. When it is ripe the man cuts down the stalks and shells out the wheat with a big threshing machine, and then it looks like this. After that it is taken to the mill and ground very fine. Wait, and I will grind some for you in the coffee-mill; there it is ground up finer than that, and then the baker makes it into crackers and bakes them."

"Well, the stuff they make the crackers of grows, then, doesn't it?"

"O, yes. I told you the other day that all our food grows out of the ground in some way. There is a great deal of this wheat grown, and when it is ground into flour it is made into bread and cake and puddings, and many other things that we eat. There are also other kinds of grain that we raise and use in the same way."

Bertie ate a little while in silence, looking now at the crackers, and now at the wheat. At last he said: "Well, auntie, they can't make any bad drink out of this, can they? Because, you see, it is all hard and dry."

"Yes, Bertie, it is hard and dry, but they wet it and soak it up, and I am sorry to say they do make a great deal of bad drink out of some kinds of grain."

"What kinds of grain?"

"Rye, for one, and corn and barley and even of wheat."

"What is rye, auntie?"

"Well, it looks a good deal like wheat, only it is not so large."

"Is it good to eat?"

"Yes; we make it up with cornmeal into rye and Indian bread, and some people make it into bread by itself. Then it is good for food; but when it is fermented and spoiled for food, it makes a very bad drink."

"Oh, yes; now I remember; that was in the little verse you taught me a long while ago,

> "I was made to be eaten,
> And not to be drank;
> To be ground in a mill,
> And not soaked in tank."

"I am glad you remember it. You may say it all if you can."

So he repeated it all very prettily, and then he went off to play in his little garden.

After a while he came back to me with a very serious face and said: "Auntie, what would it do to meif I should drink the cracker?"

"What do you mean, Birtie?"

"Why, when I was sick mamma put a cracker into a cup with some hot water and sugar and milk, and when it was soft I ate it, and then I drank up the water, and some of the cracker, too."

"Well, it didn't hurt you, did it?"

"No, I guess not; but why didn't it if I drank it instead of eating it?"

"Because you did not let it stand and rot; that's what makes the difference. When they make it into a bad drink, they let it sprout, and that makes it sweetish; and then they grind it or mash it, and soak the sweetness all out into the water; and then they let it stand and rot, and that is what spoils it. You wouldn't eat your soaked cracker if it should stand till it was sour and spoiled, would you? Don't you know how quickly mamma sent away from the table the stewed berries that were sour?"

"Oh, yes; and I remember the old lady at the hotel last summer who went away from the house because the cold beans that she sent for were sour."

"So you see people do not think of eacing rotten things, and why should they drink them? It is the rotting that makes them poisonous. That is the way in which the poison alcohol gets into them."

"And is there alcohol in everything that is rotten?"

"No; only those things that have sugar in them. It is the rotting of the sugar that makes the alcohol. Rye whisky has a great deal of alcohol in it."

"Whisky! Oh, yes, that is what papa called it. We saw a man on the street one day who acted very bad, and papa said that he had been drinking whisky. I wonder what made him drink it?"—*Aunt Julia, in Youths' Temperance Banner.*

OUR BUDGET OF LETTERS.

Here are three nice little letters that I regret came to me too late to appear in May. Never mind, dears, if you did not beat on the word "carpets." We have got some more chromos left and will give you a chance every month. I want you to write often as you can. You have done well any way, which is a credit mark to you. We will let Mary speak first:

LIVERMORE, April, 1876.

Dear Aunt Polly: I have tried again to see how many more words I could make out of "carpets." I succeeded in getting 169, which I send you. The answer to Jennie's rebus is the letter M. It is splendid fun, I think, to make out words. I hope you will give us something to puzzle our minds every month.

Your little niece, MARY C.

That is just what Aunt Polly intends to do, Mary, and she hopes you will get the chromos yet. The first list was mislaid, so that Aunt Polly doesn't know whether this new list contains the same words as the first one. If you have sent 334 different words, send you full name for the chromos.

Now hear what our little Tillie says:

MILPITAS, April, 1876.

Dear Aunt Polly: I look for the AGRICULTURIST every month with as much interest as the best farmer in the State, not that I read all about horses and cows, but I do love to read the letters your nieces and nephews write to you. I have tried how many words I could make by using the letters in "carpets," and how well I have succeeded—174 words—you must judge for yourself. I will write to you often if you will let me, and sometimes I might have a puzzle to send.

TILLIE.

We are looking for your puzzle, Tillie. Send it along.

And now who that reads Jennie's letter will say she is not smart? She came within one of earning the pair of chromos, and considering that a boy got them, and Jennie sent the largest list of any girl, I shall send her a pair of chromos, too. Isn't that right? Aunt Polly thinks so.

LIVERMORE, April, 1876.

Aunt Polly: I am sorry I did not get to write sooner and send the answers to the puzzles, but I have been away from home and could not. I hope I am not too late for a chance to get the pictures; but I have not the least hopes of getting them, for there are so many words can be formed from the letters in the word "carpets." I think the answer to Willie's enigma is Washington Irving, and to Tommy's, CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL. [Right.]

Hoping I have not sent these in too late, I will close, and remain,

Your niece, JENNIE D.

P. S.—I have succeeded in getting 313 words from "carpets." J. D.

Send your full name, Jennie, and get the chromos.

Here comes a letter from little Georgie Jewell, who is only 7 years old, written by herself without any help from anybody:

SAN JOSE, May, 1876.

Aunt Polly: I have a new little brother. He is so cunning. He was born the day after the opening of the Centennial Exhibition. We have moved on Ninth street. We had a little dog at first, and then we had a little kitten. We made a garden and thought the dog would dig the garden up and break the flowers off, and so we gave him away. The kitten was given to us just when we gave the dog away. The kitten would cry all the time, and so we gave it away as we did the dog; and when we gave the kitten away we had a baby. We have got some little chickens, too. And that is the way we go along now. So good-by. I can't stop to write any more to-day; I must go and change my dress now to go out.

Yours, truly, GEORGIE JEWELL.

Aunt Polly hopes, Georgie, that you will help mamma with the baby all you can, and tell us next time all what you do every day to help her.

Here is the letter that Walter Rose promised a long time ago. Better late than never, Walter; but best never late:

SPRING LAKE, May, 1876.

Dear Aunt Polly: My sister, Willa, thinks I am too little a boy to write you, but I know I can if she can. If she is bigger and older than I am, she needn't think that, because she is a girl, she can do what a boy can't. I'll just show her. If I do make mistakes, and don't write the best of letters now. That is nothing. I am not always going to be a little boy, I reckon.

She did not tell you that we used to live away off in Southern Arkansas, right close to where lots of wild Indians lived. We used to be dreadfully afraid of them sometimes.

Sometime, Aunt Polly, I will tell you about my big Newfoundland dog, Dick, a splendid great bow of a dog, who loved Willa and me so much; how two big Kansas rattlesnakes bit him once; how somebody at Wichita, Kansas, stole him; then how papa lost him at last. Then about our little Kansas kitten that Auntie Lottie killed and then brought to life with mamma's machine oil can, sweet oil and cream, and about mine and Willa's two little bossy cows, and little pig that auntie gave us; and—oh! ever so many things more, Aunt Polly, if you think you can spend time to read the letters of a little boy like me. Don't expect the editor of that paper (I forget what its name is) will print them, but I don't care; maybe some day, when I am bigger and have gone to school lots, he will like my letters for his paper.

Oh! I forgot. Santa Claus didn't have very much for sister and me this year, because, you see, Aunt Polly, there were ever so many very poor little boys and girls in this place, and he hadn't

money enough to get all of us as much as we would like to have. But papa and mamma says times will be better after a while, and then the children will all fare better. But we had lots of fun anyhow with our presents, and ever so many nice things mamma cooked for us to eat. I expect there is lots of terribly poor children everywhere who had no good things to eat or nice things at all. I am real sorry, Aunt Polly, aren't you? My name name is WALTER ROSE.

Aunt Polly thinks that the girl who writes the following letter is a pretty large one, but she is just as welcome as long as she has a good word for all of us and thinks so much of the AGRICULTURIST. The editor never objects to having a good word spoken for the paper. Editors are so much like proud girls—they like flattery. I wonder if our editor ever reads his own paper, and if he will see that Aunt Polly has dared to talk so about him. But listen to Kitty Hart:

SALINAS, May, 1876.

Dear Aunt Polly: There are lots of people here who take the AGRICULTURIST, and I hear what some of them say about it which you might like to know. My aunt Jane says she wants me to bring her the February number of the AGRICULTURIST, for there she saw a receipt for making cream cake which Mattie Sargent tried one day and gave her some to taste. She wishes her folks took the paper, and she hopes they will some time, for Mattie says she's tried a good many receipts from it and finds them good. A boy I know says he always reads the funny things in Aunt Polly's "Corner," and wishes there were more. He would write to her himself if he knew anything good enough. Our hired man says to me, "Kitty, fetch the agricultural paper and see what it says about feeding calves. We've got one whose mother died afore it was big enough to drink." Mother says she could not keep house without the AGRICULTURIST no how; 'cause why, she finds so many useful things there; and then it rests her to read about what "Jewell" writes on health, and the rest of the ladies about other things. Jim likes the poetry best, and learns pieces to speak at school. I learned one once, and I heard a lady read one poem from it at a church social. Sister Annie likes the gardening part, and says she is so glad she knows how to fix hanging baskets, she wants one in our best parlor. Farmer Brown, who lives near us, was talking to store-keeper Brown on the church steps, last Sunday, and he say, "Did you see Dr. Scott's article in the May number of the AGRICULTURIST? It is worth reading. Fact is, that paper, every month, contains articles worth more than the whole year's subscription." My aunt Hatty came along just then, and says she, "Yes, and the cutest part on't is, that it is temperance clear through. If you know anybody around here who don't take it, for goodness' sakes lend 'em a copy." Now I've told you enough; I was only going to write a few words to send with two subscriptions I collected for you. Inclosed you will find the names, and the money I'll send next time, when I get more. Yours, truly, KITTY HART.

Aunt Polly thanks the Lompoc *Record* for noticing one of her nephews. Charley Tucker must be a good boy to merit such words. This is what the paper says:

"Among the correspondents of the AGRICULTURIST, we notice the name of Charley Tucker, who is also the author of a word puzzle. Good for Charley! Reading, writing and thinking make a useful and well-posted man."

A MISCHIEVOUS PET.

Thinking an item from this locality would be of interest, I add a few lines. This part of Shasta county is a very poor tract of country—no orchards, flowers, or anything calculated to make life endurable.

Mr. Lendrum, on his way to Oregon with Angora goats, passed through here, and left a Kid of that breed with Mr. Warner, on Pit river. It is one of the most mischievous animals I ever saw. An out-door cupboard is a favorable climbing place for him, overturning jars of yeast, scattering seeds, and other petty mischief. One day, while Mrs. W. went out of the house for a short time, leaving the door open, Captain Kid must needs walk in and pull out a pan of bread from the oven, and devour half of it before she returned. He was fully impressed with the idea that he had a right to all the edibles he could get hold of. He helped himself liberally to strawberry vines, the best potatoes, and, I firmly believe, made away with some horseradish that we were trying to start. He seemed to have a discriminating taste, for he ate holes into the mellowest squashes, and corn fodder laid away for the cow had special attractions, together with the grain and hay, to and from which he had more exits and entrances than the squirrels. Seeing the board fence did not prevent him from going over, we laid boards on top, but he had three or four passages soon made underneath. He thought more of taking his naps on the nice, clean beds than on the cold, cold ground, at least when no one was around to tend to him. He kept Mrs. W. in a lively state of terror walking all over the braces on the bridge, for fear he would tumble in and get drowned. Taking it altogether, we want to know if there is anything (a mule excepted) with a sublimer cheek than an Angora goat.

Your journal is a most excellent one, and we would not do without it. Your outside cover cannot be beat for beauty, and as an example of woman's work is a powerful argument. Yours, truly,

T. J. PILKINGTON.

Burgottville, May, 1876.

GRANDMA'S TALKS.

Easy Lessons from Nature--No. 5.

Good morning, children! So you have been having a gay time in the garden and woods this morning. How do I know it? Why, you have brought both into the room with you. Don't you believe me, Johnny? How else should I know where you have been? Yes, indeed, you bring with you the perfume of violets from the garden, bay leaves from the woods, and paint from the brook-side. See, then, how many outside "atoms" you have unconsciously brought to me.

You want me to show you one single atom all by itself, do you, Lucy? Well, let us try to do that.

Here I have a microscope to help our eyes to see smaller things than we can with the "naked eye" (as we call using the eye without the help of magnifying glasses).

Here are two things which look very much alike: this finest of cambric needles and the sting of a bee. But compare them under the microscope. The needle looks rough and coarse, almost like a crowbar, and it seems to have lost its point; but the sting of the bee is as smooth and perfect to its sharp tip although magnified as much as the needle. Do you think you can see the tiny atom on the very end of that point, Lucy?

Here is a lump of sugar. You may pound it to powder in this little mortar, Johnny. Now we will place a few grains of this powder under the microscope. How coarse it looks! Don't you think, if we had the means, we could grind it up finer than that? Those are not atoms yet, because atoms are such very, very small particles of matter that they cannot possibly be divided into two parts, and the smallest particle of sugar must contain an atom of each of the several substances which combine to make sugar.

Now I will dip this needle into this glass of liquid which looks like water. Touch your tongue to the needle, Johnny, and tell me what it is. How do you know it is lemonade? Oh! you can taste the lemon and sugar, can you? Then imagine, if you can, how small the atoms are in that tiny drop of lemonade to give enough of the water, lemon and sugar (each composed of various substances) for you to taste distinctly.

I will now rub some of this bright red paint, which we call carmine, upon this saucer. Now I will mix it with the water in this large pitcher. Do you see what a pretty color it has all become? The particles of carmine have separated and mingled with the water, and see how minute they must be to color nearly a gallon of water.

If you keep only one violet in a room, it will throw off particles of perfume for days, and yet not grow smaller in size. So it is with musk, which has a strong perfume. I have read that one grain of musk will sent a room ten years and weigh as much as at first. Of course, particles of the musk are constantly leaving the grain, but we cannot measure the loss.

Thus you perceive that the very smallest particle of matter that you can see or taste or smell is made up of millions of smaller ones which are composed of atoms of *simple* substances (these are substances which contain only one kiud of matter). Do you think, Lucy, that your eyes have the power to see one single atom all by itself? No, indeed, we cannot even imagine the smallness of an atom, neither can we really know the capacity of matter for being divided and sub-divided. This property, belonging to all matter, is called *Divisibility*. You can remember that word easily, children, because every alternate letter in it, except the last one, is an *i*.

You are very much interested in that microscope, children, and well you may be. There is really no end to the wonderful facts to be learned by the use of a microscope. When I was a little girl, I remember seeing a drop of water magnified by means of a solar microscope. The drop of water looked as large around as that centre table, and it was alive with creatures, some very small and some like monsters gobbling up everything that came in their way. Now in that drop of water the naked eye could see no living thing, but by the aid of the microscope what curious and astonishing creatures appeared, swimming as freely in that one drop as fishes do in the ocean.

You ask, Johnny, if all the water we drink is just like that, full of such fighting and gobbling creatures. It is probable that all water contains living creatures, though I have been told that the microscope does not detect such quantities in fresh water fit for drinking; stagnant water, which is poisonous to us, contains the kind of creatures that I saw.

But only think, children, how small the atoms must be in those lively little bodies! Think, too, of the infinite Wisdom which can plan and perfect such wonders!

FOR THE "CORNER."

FROM M. E. T.

I am going to tell you a story about the same little Willie with whom I made that contract. You may not see anything very funny in it, but I am sure you papa and mamma will laugh when they hear you read it.

Willie was very fond of reading, and would stay in doors for hours quietly reading his favorite book, the New Testament. Now, Willie was a poor reader, and a poor speller, too, for a boy eight years old. It happened about this time that a great political contention was going on, and the words "Democrat" and "Republican" were heard almost every day; besides Willie's infant mind had been fed on troubles arising from the spirit of partyism, and which had had the effect of stamping upon his memory the importance of a party name. One day, after reading, he sat apparently meditating upon the sacred pages before him, when suddenly a sober face was raised and a solemn voice said, "Mamma, was Jesus a Democrat?" Mamma was both amused and astonished at so odd a question, but when she saw the earnest look upon his face she said, "Why do you ask?" "Because I have read where Jesus ate with *Republicans* and sinners, and I thought perhaps he might have been a Democrat."

THE PUZZLE CORNER.

The boy or girl that will send Aunt Polly the best original puzzle shall have three chromos; the one who will send the second best puzzle shall have a pair of chromos, and the one who will send the third best shall have one chromo. Now, nephews and nieces, we want some original puzzles that it will be worth chromos to find out, and we want you all to see what nice puzzles you can make to try each other's skill.

Typical Trees.

For gouty people—the ache corn.
For antiquarians—the date,
For school boys—the birch.
For Irishmen—the ochl
For conjurers—the palm.
For negroes—See dah!
For young ladies—the man go.
For farmers—the plantin'.
For dandies—the spruce.
For actors—the pop'lar.
For physicians—syc a more.
For you wife—her will oh.
For lovers—the sigh press.
For the disconsolate—the pine.
For sewing machine people—the hemlock.
For boarding house keepers—'ash.
Always on hand—the pawpaw.
Who is this written for—yew.

A Very Singular Sentence.

"Sator arepo tenet opera rotas."

1. This spells bakward and forward all the same.

2. Then taking all the first letters of each word spells the first word.

3. Then all the second letters of each word spells the second word.

4. Then all the third, and so through the fourth and fifth.

5. Then commencing with the last letter of each word spells the last word.

6. Then the next to the last of each word, and so on through.

Read the new advertisements on second page of cover.

Beneath the hair, there is developed, in the autumn, *a short and exceedingly fine wool*, from which the famous Cashmere shawls are fabricated."

These descriptions prove conclusively (as I have elsewhere publicly claimed, without being disputed) that the Angora and the Cashmere are distinct and very different breeds of goats, especially in the important particular of their fleece.

The major portion of the world's production of mohair or Angora goat's fleece comes from Asia Minor. The imports into England alone now reach nearly seven million pounds annually. Considerable quantities are also produced at the Cape of Good Hope, and in Australia, while in our own country, California is beginning to compete with foreign producers. The Angora goat was first introduced to the Pacific Coast, in 1861, by W. M. Landrum, who took across the plains some bucks of the Davis-Peters stock.

The value of mohair, of a fair merchantable quality, — discarding fictitious, inflated prices and coming down to "hard pan"—is now from 60c. to $1 20 per pound in England and the United States. Quotations in Liverpool, 77 to 78c., and 93 to 94c., gold, the last sum equivalent to $1 20 gold, it this country, after adding duties and expenses.

Angora goats, mixed and pure, bring about the following prices in California: Ewes — half-breed, $4; three-quarter breed, $6; seven-eighth, $9; finer grades, $30; thoroughbreds, from $120 to $175 per head. Bucks—mixed, about $30; first-class thoroughbreds, from $150 to $200 each.

From these facts, it will be seen that this pursuit, though still in its infancy, has profit enough in it to give it a great outcome. The place to raise these goats, however, is not on the small farms of the Eastern and Middle States, nor in gentlemen's parks, gardens or lawns—for they will go "through and through" the waste lands and the wide ranges of the Pacific States and Territories, where the climate, herbage and other conditions are most favorable.

One point particularly to be noticed in these animals, is that they feed on herbage that sheep will not eat, and clean up the land for sheep. This makes them especially desirable as adjuncts to the sheep-raiser. In California, they say, in a flock of 1,000 sheep, kept by the same shipper, 500 goats additional can be easily managed without taking from the food of the sheep, the goat eating the weeds and briars, and leaving the grass for the sheep.

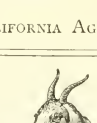
THE CALIFORNIA AGRICULTURIST, a magazine devoted to the interests of the farmer, published at San Jose, is upon our table. It is replete with valuable information for the class of readers for which it is intended, and serves its purpose better than any periodical ever published on this coast. It has long since become an exploded idea that book farming is not successful, and agricultural papers are rapidly coming into prominence. Indeed, why not? Agriculture is essentially the leading industry of the land, and there can certainly be nothing more important in developing these interests than an able exponent. As such we recommend the CALIFORNIA AGRICULTURIST, published at San Jose.—*Solano Republican, May* 11.

A. O. HOOKER, L. FINIGAN,
Late Gunckel & Hooker. (late of Marysville.)

HOOKER & FINIGAN,

DENTISTS.

Office—359 First street, San Jose.

Gloves  Gloves.

CHEAP, COMFORTABLE, SERVICEABLE

THE ANGORA

ROBE AND GLOVE CO.,

OF SAN JOSE, CAL.,

Are making a Specialty of Manufacturing all styles of Gloves from the Angora Goat Skin, and claim for them:

1st.—They are cheaper than buckskin gloves.

2d.—The skins are tanned with the grain on, and are very nearly water-proof, and when, by long exposure, they are wet, they dry out perfectly soft—as good as new.

3d.—They will out-wear the best buckskin gloves.

4th.—For a HARVEST GLOVE, they have no equal.

These articles are manufactured in all styles, from the cheapest Laboring Glove to the Finest Fur Gauntlet. Also, all descriptions of

FURS, ROBES, MATS, RUGS, Etc

Which, for Beauty, Durability, and Cheapness, are inferior to none.

Buckskin Gloves, Mittens, Etc.,

In all varieties, and as good as the best.

Fine Poultry.

Black-Breasted Red Games, from imported stock, warranted to stant stock; absolute purity of strain guaranteed. Eggs $5 per dozen. Trios, after August 1st, $20.

Dark Brahmas, from imported stock, Eggs $5 per doz. Trios, after August 1st, $20.

Brown Leghorns, Superior variety. Eggs $1 per doz. Trios, after August 1st, $15.

My Games are from stock imported by me from the most celebrated breeders in the United States and England.

Under no circumstances will an inferior bird be sold. Purchasers can rely in all cases upon receiving the best.

Orders received will be filled in rotation. Refer to the Editor of this paper.

FRED. E. COLLINS,

P. O. Box 171, San Jose. my

SMALL FARM

FOR SALE!

A GREEABLY SITUATED ON THE FOOTHILLS in the WARM BELT, nine miles from San Jose, near Los Gatos. 25 acres in Cultivation, 65 acres of Pasture and Live-Oak Grove, 80 acres of Chaparral and Woodland; two Springs on the place.

Dwelling House, Barn, Orchard, Garden, Well, 2 Good Horses, One Colt, 4 years old, One Farm Wagon, One Spring Wagon, 12 Tons of Hay, 5 Head of Dairy Stock, 50 Chickens, Good Farming Implements, House Furniture, Lot of Tools, &c.

Title, U. S. Patent.

Price, $3,500—Part Cash, easy terms for the Remainder.

Address, LOS GATOS P. O., or apply on the Premises to the Proprietor,

G. GUERINOT.

FARMERS NATIONAL GOLD BANK

....OF ...

SAN JOSE.

Paid up Capital (gold coin).... $500,000
Authorized Capital.....$1,000,000

John W. Hinds, President; E. C. Singletary, Vice-President; W. D. Tisdale, Cashier and Secretary; L. G. Nesmith, Assistant Cashier.

Directors—C. Burrel, Wm. D. Tisdale, E. L. Bradley, C. G. Harrison, E. C. Singletary, Wm. L. Tisdale, John W. Hinds, W. H. Wing, T. B. Edwards.

Correspondents—Anglo-Californian Bank (limited), San Francisco; First National Gold Bank, S. F.; First National Bank, New York; Anglo-Californian Bank (limited) London.

WILL ALLOW INTEREST ON DEPOSITS, buy and sell Exchange, make collections, loan money, and transact a General Banking Business. Special inducements offered to merchants, mechanics, and all classes for commercial accounts.

S. W. Cor. First and Santa Clara Sts., SAN JOSE.

SAN JOSE

SAVINGS BANK,

286 *Santa Clara Street.*

CAPITAL STOCK - - $600,000
Paid in Capital (Gold Coin) - $300,000

Officers:—President, John H. Moore; Vice-President, Cary Peebles; Cashier, H. H. Reynolds; H. L. Cutter, Secretary.

Directors—John H. Moore, Dr. D. Bryant, S. A. Bishop, Dr. W. H. Stone, Cary Peebles, S. A. Clark, H. Messing.

NEW FEATURE!

This Bank issues "Deposit Receipts," bearing interest at 6, 8 and 10 per cent per annum; interest payable promptly at the end of six months from date of deposit. The "Receipt" may be transferred by indorsement and the principle with interest paid to holder. Interest also allowed on Book Accounts, beginning at date of deposit. Our vaults are large and strong as any in the State, and specially adapted for the safe keeping of Bonds, Stocks, Papers, Jewelry, Silverware, Cash Boxes, etc., at trifling cost. Draw Exchange on San Francisco and New York, in Gold or Currency, at reasonable rates. Buy and sell Legal Tender Notes and transact a General Banking Business.

FARMERS' UNION.

(Successors to A. PHISTER & Co.)

Cor. Second and Santa Clara Sts.,

SAN JOSE.

CAPITAL - - - - $100,000.

WILLIAM ERESON - - - - President.
H. E. HILLS - - - - - - Manager.

DIRECTORS:

Wm. Erkson, J. F. Dudley,
L. F. Chipman, David Campbell,
Horace Little, James Singleton,
C. T. Settle, E. A. Braley.
Thomas E. Snell.

☞ Will do a General Mercantile Business. Also, receive deposits, on which such interest will be allowed as may be agreed upon, and make loans on approved security.

J. M. MOOREHEAD

Is now receiving the finest and most elegant line of

MILLINERY, FANCY GOODS,

—AND—

LADIES' FURNISHING GOODS

Ever offered in this City—

All of Our Own Direct Importations,

At 270 SANTA CLARA STREET,

Opposite the Auzerais House,.....San Jose.

Ladies' Hats and Bonnets

BLEECHED, PRESSED, and DONE OVER

In all the New Shapes.

STAMPING DONE TO ORDER

In the Best Manner.

SAN JOSE

INSTITUTE

—AND—

BUSINESS COLLEGE!

A Day and Boarding School for Both Sexes.

THE SECOND SESSION OF THE CURRENT School Year will commence January 3d, 1876.

In acknowledging the kindness of the patrons of this School, the Proprietors desire to assure them that with the increased patronage will be added increased facilities for imparting instruction. They intend that the School shall offer the very best opportunities for acquiring thorough education, both theoretical and practical.

The course of study in the Academic grade is extensive and thorough.

The Business College has no vactions.

Students from a distance will find pleasant rooms and board at reasonable prices at the boarding-house.

The Faculty accept to its fullest extent the growing demand of the industrial classes for recognition in the public educational system hailing it as the harbinger of a higher and better civilization.

ISAAC KINLEY,
Superintendent of the Institute.
JAMES VINSONHALER,
Principal of the Business College.

FOR THE HARVEST OF 1876.

FARMING MACHINERY

At Cost of Importation.

BERRY & PLACE, San Francisco,

Agents for J. I. CASE,

ARE PREPARED FOR THE COMING HARVEST with the largest stock of Improved Machines and Implements, ever offered to the farmers of California. These machines are **all new,** mostly built this season, and now just being received from the factory. The list embraces such machines as,

ÆTNA MOWERS.

Price $100. Extras for which we guarantee to keep always on hand. Weight, 650 lbs.; cuts 4 feet 6 inches wide. Has Double Knife, and is the best machine ever sold in California.

ÆTNA AND KIRBY REAPERS,

At from $150 to $200. We have a large stock on hand, and are determined to sell them, regardless of cost.

Patent
TREADWELL'S Single- HEADERS, gear

Made by J. I. Case & Co. The best ever sold in California. Ask any man who has tried one, "What he thinks of it."

HOADLEY ENGINES.

The new style Hoadley Straw Burner is the finest threshing engine in the world. Price, $1700. The standard 15-horse power Hoadley, $1650; 12-horse power, $1450; 9-horse power, $1200 All with heavy running gear, and all improvements.

THE END-SHAKE THRESHER.

These Threshers are the finest in the world. Send for REDUCED PRICES.

THE WHITEWATER WAGON.

This is the STANDARD WAGON on the Pacific Coast. Send for reduced prices.

☞ We have a few Pacific Wagons on hand, which we offer below cost. Send for prices.

☞ Any farmer buying $100 worth of machines or implements of us, will be paid his fare to San Francisco and back, if not over 200 miles. He can thus come and see for himself without any expense.

BERRY & PLACE,

Old Stand, Market, head of Front st. San Francisco.

SANTA CLARA TANNERY.

JACOB EBERHARDT - - Prop'r.

ALL KINDS OF LEATHER, SHEEP-skins and wool. Highest price paid for Sheep Skins, Tallow, Wool, etc.

BREEDERS' DIRECTORY.

Parties desiring to purchase Live Stock will find in this Directory the names of some of the most reliable Breeders.

OUR RATES.—Cards of two lines or less will be inserted in this Directory at the rate of 50 cents per month, payable annually.

A line will average about seven words. Count five words for the first line.

CATTLE.

S. R. EMERSON, Mountain View, Santa Clara County, Cal.—Breeder of Short-Horn and Holstein Cattle and Cotswold Sheep.

CYRUS JONES & CO., San Jose, Santa Clara County, Cal.—Breeders of Short-Horn Cattle. "Young Bulls for sale."

CHARLES CLARK, Milpitas, Santa Clara County, Cal.—Breeder of Short-Horn Cattle and Swine.

COLEMAN YOUNGER, San Jose, Santa Clara County, Cal.—Breeder of Short-Horn Cattle.

C. B. POLHEMUS, San Jose, Santa Clara County, Cal.—Breeder of Short-Horn Cattle.

CARR & CHAPMAN, Gabilan, Monterey County, Cal.—Breeders of Trotting Horses, Short-Horn Cattle and Swine.

W. L. OVERHISER, Stockton, San Joaquin County, Cal.—Breeder of Short-Horn Cattle and Swine.

MOSES WICK, Oroville, Butte County Cal.—Breeder of Short-Horn Cattle.

SHEEP AND GOATS.

C. P. BAILEY, San Jose Cal.—Importer, breeder, and dealer in Cashmere or Angora Goats. Fine Pure-bred and Grade Goats for sale.

McCRACKEN & LEWIS, San Jose, Cal.—Importers and breeders of fine Angora Goats; also, fine Cotswold graded bucks for sale.

MRS. ROBERT BLACOW, Centerville, near Niles Station, Alameda County, Cal.—Pure-blooded French Merino Rams and Ewes for sale.

SWINE.

CHARLES CLARK, Milpitas, Santa Clara County, Cal.—Breeder of Pure-bred Berkshire Swine.

POULTRY.

MRS. L. J. WATKINS, Santa Clara—Premium Fowls. White and Brown Leghorn, S. S. Hamburg, L. Brahmas, B. B. Red Game, Game Bantams, and Aylesbury Ducks. Also, Eggs.

MISCELLANEOUS.

HARRIS BERRING, San Jose, Cal.—Agent for several breeders of Best Pure-bred animals and poultry. We bring the breeder and purchaser together direct, and do not stand between them, while we aid each free of charge.

SPLENDID CARD PHOTOGRAPHS, only **$2** a dozen, and Cabinets **$4** a dozen, at HOWLAND'S Gallery (Heering's old stand) No. 359 First street, San Jose.

WALLACE & CO., No. 386 First street—Handsome turnouts always on hand at fair prices. Fine Hearse for Funerals. Carriages for sale. Give us a trial.

H. S. LAMKIN,
ATTORNEY-AT-LAW—ROOMS 3 AND 4, Stone's Building (opposite Auzerais House), Santa Clara street, San Jose.

DR. J. BRADFORD COX, OFFICE, OVER T. W. SPRING'S STORE, opposite the Post Office, San Jose.

C. S. Crydenwise,

CARRIAGE MAKER. PIONEER Carriage Shop.

314 *SECOND STREET,*

Between Santa Clara street and Fountain Alley, San Jose.

Agent for Fish Bro.'s Wagons.

F. W. WOLLF,

The only agent in San Jose for the LIGHT RUNNING

DOMESTIC

NEW WILSON,

REMINGTON,

AND VICTOR

SEWING MACHINES.

A full assortment of SILK, THREAD, OIL, ATTACHMENTS, the Best Needles for all Sewing Machines constantly on hand.

319 Second Street,

Opp. Fountain street, San Jose. my

The Goodenough

COMMON-SENSE SYSTEM

HORSESHOEING SHOP!

Cor. Santa Clara and San Pedro Streets (opposite Post Office).

The only Natural Method of Shoeing the Horse to prevent

Corns, Quarters Cracks, Contraction of the Hoof, and all Lameness Resulting from Unsound Feet.

JOHN PADDLY, Proprietor.
JAS. LAMB, Practical Shoer.

Something New, Ladies!

Just What You Want for Yourself and Children.

DON'T FAIL to SEND FOR a PATTERN

ONLY 25 CENTS.

Comfortable Combination Clothing.

THIS STYLE OF UNDERCLOTHING FOR Ladies has been found by all who have used it, the most convenient and comfortable, as well as economical of any now in use. Models were exhibited and attracted much commendation at the late Fair.

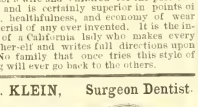
Patterns can be had by applying to **Mrs. Herring**, east side of Ninth street, between St. John and St. James streets, San Jose, (where samples can be seen,) or by addressing

C. C. C. Company,
Box 686 San Francisco.

This reform underclothing has been worn by the Editor's wife and children for the past two seasons, and is certainly superior in points of comfort, healthfulness, and economy of wear and material of any ever invented. It is the invention of a California lady who makes every pattern her-elf and writes full directions upon each. No family that once tries this style of clothing will ever go back to the others.

Dr. N. KLEIN, Surgeon Dentist.

Room next to Wright's Photographic Gallery, Santa Clara St.



☞ The National Gold Medal was awarded to Bradely & Bulofson for the best Photographs in the United States, and the Vienna medal for the best in the world.
429 Montgomery street, San Francisco.

1776 **CENTENNIAL** 1876

PROCLAMATION.

Chicago & Northwestern Railway.

Is the popular route overland to the East.

Passengers for Chicago, Niagara Falls, Pittsburg, Philadelphia, Montreal, Quebec, New York Boston, or any point East, should buy their trans-continental tickets via the pioneer route,

THE CHICAGO & NORTHWESTERN R.R.

This is the Best route East. Its Track is of Steel Rails, and on it has been made the Fastest time that has ever been made in this country. By this route passengers for points east of Chicago have choice of the following lines from Chicago:

Pittsburg, Fortwayne and Chicago and Pennsylvania Railways.

Through trains daily, with Pulman Palace Cars through to Philadelphia and New York on each train.

THROUGH TRAIN, WITH PULLMAN PALace Cars to Baltimore and Washington.

By the Lake Shore and Michigan Southern Railway and Connections (New York Central and Erie Railways):

THROUGH TRAINS DAILY, WITH PALACE Drawing Room and Silver Palace Sleeping Cars through to New York.

By the Michigan Central, Grand Trunk, Great Western and Erie and New York Central Railways:

Through trains, with Pullman Palace Drawing Room and Sleeping Cars through to New York to Niagara Falls, Buffalo, Rochester, or New York city.

By the Baltimore and Ohio Railroad:

Through trains daily, with Pullman Palace Cars for Newark, Zanesville, Wheeling, Washington and Baltimore without change.

This is the Shortest, Best, and only line running Pullman celebrated Palace sleeping cars and coaches, connecting with Union Pacific Railroad at Omaha and from the West, via Grand Junction, Marshall, Cedar Rapids, Clinton, Sterling and Dixon, for Chicago and the East.

This popular route is unsurpassed for Speed, Comfort and Safety. The smooth, well-ballasted and perfect track of steel rails, the celebrated Pullman Palace Sleeping Cars, the perfect Telegraph System of moving trains, the regularity with which they run, the admirable arrangement for running through trains to Chicago from all points West, secure to passengers all the comforts in modern Railway Traveling. No changes of Cars and no tedious delays at Ferries.

Passengers will find Tickets via this Favorite Route at the General Ticket Office of the Central Pacific Railroad, Sacramento, and in all the Ticket Offices of the Central Pacific Railroad.

MARVIN HUGHITT, W. H. STENNETT,
Gen'l Supt., Chicago. Gen'l Pass. Agent.
H. P. STANWOOD, General Agency, 121 Montgomery street, San Francisco.

Locke & Montague,

IMPORTERS AND DEALERS IN

Stoves, Pumps, Iron Pipe, Tinware &c.

112 and 114 Battery St.,
SAN FRANCISCO.

Closing Out Stock

THE SUBSCRIBERS, INTENDING TO CLOSE up their business with as little delay as possible, now offer their stock of

Jackson Wagons!

As a WHOLE, or at RETAIL, on the most favorable terms and at very low prices.

J. D. ARTHUR & SON.
mh Cor. California and Davis st., S.F.

Menefee & Gaston

DENTISTS,

S. W. Cor. Santa Clara and First Sts

Over Farmers' National Gold Bank.

SAN JOSE.

☞ Special attention given to Fine Gold Fillings. Laughing Gas Administered.

EMPEY & LENNARD,

Manufacturers and Dealers in

HARNESS, COLLARS,

SADDLERY,

Carriage Trimmings, Etc.

No. 262 Santa Clara Street.

SAN JOSE.

T. W. Mitchell,

Porter's Block, cor. Santa Clara and Second Sts,
SAN JOSE.

SEEDSMAN and FLORIST

And Dealer in Flowering Plants, Ornamental Shrubs, Bulbs and Flowering Roots in Variety Ranging Baskets, Dried Grasses, French Immortelles of Assorted Colors, Etc., Etc.

☞ Seeds, Fresh and Reliable.

LEATHER BELTING.

R. C. KIRBY & CO.,

TANNERS!

SANTA CRUZ OAK-TANNED SOLE LEATHER,
WHOLESALE DEALERS.

Office—102 and 104 Battery Street, *SAN FRANCISCO.*

The Bee-Keepers' Magazine.

50

AN ILLUSTRATED Monthly Journal of 32 octavo pages devoted exclusively to BEE-CULTURE. Edited by ALBERT J. KING, containing monthly contributions from Mrs. L. S. TUPPER, and other eminent Bee-Keepers in both EUROPE and AMERICA. A large space is devoted to BEGINNERS giving useful information just when it is needed throughout the year. TERMS: **$1.50** per year. We will send the MAGAZINE **4** MONTHS ON TRIAL and INCLUDE a 64-page pamphlet (price 50 cts.), containing a beautiful lithoed chromo of HONEY-PLANTS and ITALIAN BEES in their natural colors, Prize Essay by Mrs. TUPPER, Queen Rearing by M. QUINBY, Instructions for Beginners, etc., **all for 50 cts.** Address,

KING & SIDDUM,
61 Hudson Street, New York.

PRINTING.

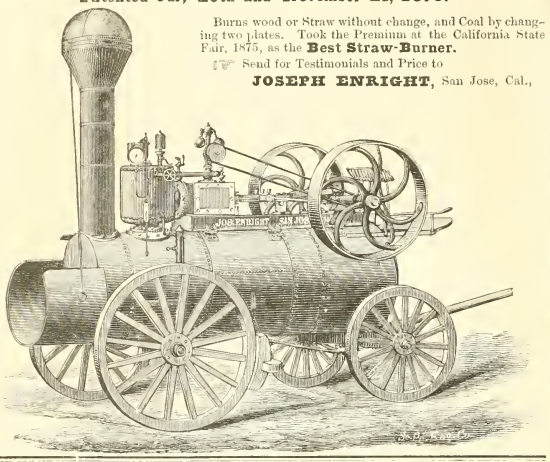
Posters, Dodgers, Handbills, Books, Catalogues, Circulars, Programmes, Bills of Fare, Invitations, Receipts, Labels, Blanks, Billheads, Statements, Cards, Tags, etc., together with every description of Job Printing executed promptly and in a workmanlike manner by COTTLE & WRIGHT, No. 314 Market st, over Bland & Regnart's auction store, San Jose.

DR. C. R. SPAW,
Resident Dentist,
Corner of First and Santa Clara streets, In McLaughlin & Ryland's building, San Jose, Cal.

☞ For **75 subscriptions** to the **California Agriculturist**, at **$1.50** each, the publishers will give a **$70 New Davis Sewing Machine**. Here is an opportunity for some energetic lady to get the best Sewing Machine for a little time well employed. The **DAVIS** took the first premium at the Santa Clara Valley Agricultural Society's Exhibition last Fall.

Enright's Patent Portable Wood and Straw Burning Engines

Patented July 20th and November 2d, 1875.



Burns wood or Straw without change, and Coal by changing two plates. Took the Premium at the California State Fair, 1875, as the **Best Straw-Burner.**

☞ Send for Testimonials and Price to

JOSEPH ENRIGHT, San Jose, Cal.,

SMOKING CHIMNEYS CURED

The GOTHIC VENTILATOR and CHIMNEY TOP

HAS PROVED A COMPLETE Success in curing the most obstinate, sluggish and smoky chimneys. It stands on the top of the chimney, and does not require a smoke-stack to carry it above the surrounding buildings.

It is the only Chimney top that will work satisfactorily when surrounded by high buildings. For ventilating Elevators, Machine Shops, R. R. Depots, Car Shops, etc., it is unrivaled.

N. B.—Send inside measurement of top of chimney or ventilating shaft.

All Chimney Tops guaranteed to give entire satisfaction, and if any should fail after a trial of two months we will cheerfully refund the money.

F. KLEIN,

227 SANTA CLARA STREET.

SAN JOSE.

J. C. VENNUM.

DEALER IN

CARRIAGES, BUGGIES, PHAETONS and SPRING WAGONS.

☞ ALL WORK WARRANTED ☜

No. 447 FIRST STREET, San Jose.

EXCELSIOR MARBLE COMPANY

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VOL. 7 — EUREKA — CALIFORNIA — No. 7

AGRICULTURIST

AND

LIVE STOCK JOURNAL

A HOUSEHOLD MAGAZINE.

A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

JULY.

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Has taken the Agency of this Dryer, believing it to be the

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This Dryer consists of a sheet iron furnace, from five to eight feet long, and two feet high, with a partition running horizontally six inches below the top, on the inside, the full length and breadth of the furnace, except a space of five inches at the back end. Beneath this partition the fire is kept, the heat of which passes to the back, and there turns a flange upward through the five inch space, and passes between the partition and top, back to the front end of the furnace and out of a chimney above the chest of drawers.

This arrangement completely equalizes the heat at each end and all along the top of the furnace, so that no one drawer is at any time hotter than the others.

The attachment to hold the fruit for drying, consists of a tier chest of drawers made wide enough to set out on each side and end about 15 inches from the furnace, and it is inclosed with tongued and grooved lumber, except space in front for the furnace and on each side for the drawers to pass in above the furnace. This chest is lined two feet high on the inside with sheet iron, and two inches from the drawers in from each side, supported by pieces passing from one side across the top of, and one foot above the furnace to uprights on the other, and meet in the center over the furnace. The bottoms of these drawers are made of wire cloth, on which the fruit is laid for drying. Over the center of each tier of drawers is a hole four inches square in the top, with a slide to keep it open or closed as the case may require, and through these openings the hot air passes in a continuous current from the furnace below. The space in front not filled by the furnace, is closed by a piece of sheet iron fitted over and down on each side, and to this piece there are two ventilators at the side of the furnace where the fire is hottest, to admit air. These two are the only places where air enters, and it is made very hot by the heat of the furnace, as it enters and passes rapidly up through the fruit in the drawers, and out at the ventilators at the top. This arrangement keeps a constant current of hot air passing through each drawer, which keeps it in the most rapidly drying process.

The chest of drawers is from four feet high to as high as desired. The drawers occupy about 4 inches space in the hight of the chest, and are about two feet deep, and 34 inches wide, and hold 25 pounds of fruit. But fruit will dry faster by putting in 12 pounds, and as it dries out a little, double it up. The machine can be built to have from 12 to 108 drawers, and will dry from 1000 pounds to five tons per day, of green fruit. Will dry any kind of fruit or vegetables in from one and a half to eight hours.

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Capt. Joseph Aram, of San Jose, has one, and pronounces it perfect. Persons interested are invited to call at the Excelsior Marble Works, Second street, and examine these Pumps, or address,

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 7--No. 7.} SAN JOSE, CAL., JULY, 1876. {SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

THINNING OUT GROWING FRUITS.

Our best orchardists pay a great deal of attention to thinning out where too much fruit sets upon the trees to all grow to perfect size. On an average, at least one half of the fruit is taken from the trees when about the size of hickory nuts, and frequently two-thirds to three-fourths of it is picked off where the tree is crowded with fruit. There are two good reasons for this: one to prevent the limbs from breaking under the load of ripening fruit, and another to insure the large size of the fruit that is left upon the tree, together with superior eating qualities. The size and beauty of fruit has a good deal to do with its marketable value. Pruning the trees severely, removing the fruit-bearing twigs, will prevent over-bearing, but at the injury of the tree. Better encourage as many fruit spurs to grow as possible, and make a practice of thinning out the fruit. It will pay to do so. It will look like a waste to one not accustomed to it to pull off a large quantity of growing fruit, as is often expedient, but the superior weight and excellence, when grown, of what is left, will surely satisfy anyone that i, is good policy.

THOUGHTS ON OVER-PRODUCTION AND FINANCE.

We read a good deal about *over-production*, and consequent idleness of manufactories and many poor people thrown out of employment. Now, when we see so many people wanting and needing the very articles which it is claimed are over-abundant—so many people who have not the wherewith to procure these productions which they desire, we are inclined to attribute all such hard times to some other cause. If wealth consists of the produce of industry, the more produced the more wealth, would seem a fair proposition; and the less labor performed the less wealth, as a natural consequence.

Now it will not take many words for us to express our convictions upon this point. What is most needed is the ability to consume. We are personally acquainted with lots of people who would have better houses, better clothes, a great variety of food, better furniture, and a thousand and one comforts and conveniences if they could afford it. They are willing to work for fair pay, and would be glad to be so situated financially that they could consume and appropriate the good things of life without neglecting business. Now if everybody should work, see how abundant would become all the necessaries, and thousands of the luxuries of an advancing civilization. There would be enough for all, at least of the essentials. There never was so big a humbug as this cry of "over-production."

What we want is a financial system which will make money so plenty and cheap—so far as relates to interests—that every one who produces a thing can find purchasers. Then industry will be encouraged, instead of shackled as is now the case. There will be no monopoly of money by the few banks, no usury to consume the earnings, but every one will stand upon a nearly equal plain, where industry will reign supreme.

Now, how can this thing be brought about? By the Government. Currency should be issued and loaned to the people at very light rates to cover the expense of doing the business and to assist in raising revenue to support the Government, which would lessen the taxes. The Government might deal with the people through States, counties, towns, etc., receiving security in all property for the return of the money and interest. In some such way as this, money might become as plenty as desirable, under proper restrictions. Instead of being *king*, money would simply be a servant—a convenience. Instead of being itself a value, it would simply be a representative of values—and in reality it can be of itself no more. *Wealth* would then consist, as it ought to, *of the productions of industry*.

Although a perfect financial system might not correct all the abuses existing among selfish and dishonest men, it would at least deprive money speculators of the power of dictating to industry; it would foster industrial enterprises by paying labor according to its deserts, thus rendering it not only possible, but easy for an honest man to make an honest living.

DESTRUCTIVE CATERPILLARS.

Last year we noticed the caterpillars in Mr. Watkins' and Mr. Gould's orchards in Santa Clara as follows: "In our valley the caterpillars are destroying the fruit crop in some orchards, others they have not troubled. We saw hundreds of trees in Gould's and Watkins' orchards with the foliage stripped from them. They are not the tent caterpillars, but when not eating the leaves cluster together on the large limbs and trunks of the trees. When in this position it would not be a difficult matter to destroy great numbers of them, but we saw no disposition to attempt their destruction, and were told that there was so little profit in fruit culture that it would not pay to spend the time necessary to kill them."

This season there were literally millions where there were thousands of these pests last year. Mr. Watkins' orchard has been stripped as bare as bean poles or last year's mustard stalks. This was done about the middle to the last of May. The consequence is, the bare trees, exposed to the hot sun with stagnated sap, become parboiled under the bark, the bark splits open on the sunny side, borers are invited, and the fruit crop is not only destroped this season, but the trees are ruined forever. Think of fifty acres of orchard ruined by these caterpillars in this way.

Mr. W. has closely examined the habits of this caterpillar this season. He finds that the butterfly lays the eggs only upon twigs about one-eighth of an inch in diameter, mostly on new growth, and that close shortening-in pruning will take the eggs off without injuring the trees. Each insect lays about 150 eggs in a glutinous band about the twig. These are easily discerned by a practiced eye, and may nearly all be removed from the tree during the fall and winter by pruning. What are accidentally left may be noticed about as soon as hatched, as they at once commence work on the nearest foliage in a body and may be destroyed. What few are left, if any, may be killed as they collect on the large branches and body of the trees to rest, when about half grown. One thing we think is clearly proved, it will not pay to let such pests destroy orchards without at least a fair contest of industry and skill against them.

In a conversation with Mr. J. W. Briggs, orchardist, we learn that his large orchard near Marysville was, a few years since, filled with these caterpillars. He thinks they were first discovered on the willows. He made short work of them in precisely the same manner as Mr. Watkins suggests as being the best. We must warn our orchardists to watch out for these pests, and be sure to get the start of them before they do other serious damage.

A GRAND EUROPEAN GARDEN.

Mr. J. C. Schmidt, of Erfurt, Prussia, writes to us an account of his splendid nurseries and garden and conservatories, which we take pleasure in laying before our readers. He accompanies the letter with beautiful illustrations of his places, etc. He says:

During the season I publish eight catalogues: one wholesale list for Germany; one wholesale list for England and America; one wholesale list for France; one catalogue for private persons in Germany, and one for private persons in Austria; one wholesale list for seeds; one catalogue for decorative plants, etc., and one for bulbs.

Under my own cultivation I have 300 acres, with flowers and grasses for drying purposes, but I only cultivate the better species, about one-third of the yearly want, the other two-thirds I have contracted with gardeners.

I have a large steam dye for flowers, grasses and moss, in which about fifty persons are engaged; also, a steam engine for a drying machine, and steam dye halls and large rooms for drying flowers.

In the horticultural establishment and nurseries, 75 to 100 men and 100 to 150 female persons are working. For binding boquets about 150 girls are engaged. Working people in all, 400 to 500 persons.

The department for export contains chiefly fabricates of dyed flowers, grasses, etc., of not surpassed color and arrangement. Further, I export all the raw stuff for florists, viz.: flowers, grasses, mosses, bouquet papers, pot covers, basketware, elegant straw baskets, fabricates of wire, all sorts of home adornment, plants-stands, vases, flower tables, reservoirs for gold fish, etc.

The most important part of my establishment are the hot and cold houses, covering more than three acres of space, one of which is about 180 feet long and contains only palms, the others are for cultivation of Azales, Camellias, and all sorts of plants for cut flowers.

Your obedient servant,

J. C. SCHMIDT.

GRAFTING LARGE GRAPE VINES.

Mr. T. H. Payne, of Santa Cruz, wrote to the editor, last spring, to know the best way to graft large grape vines, five or six inches in diameter. Through somebody's carelessness, the letter has just reached us. Although out of season, we will answer now, and let those who want the information remember for another season.

The time we would choose for grafting would be just as the leaves commence to form on the old vine. The scions should be previously taken from the last season's growth of such variety of grape as is most desirable to propagate. Choose the strongest cuttings for scions. Remove the earth from about the stalk of the old vine eight inches deep, and at least seven inches below the surface make an incision with a chisel into the stalk deep enough to firmly insert the scion, which should be cut wedge-shaped as usual for grafting. One or more of these scions may be inserted. Trim the old vine back pretty closely, but allow it to grow the first year. The reason for this way of grafting, instead of cutting the old stalk off before grafting, is that the circulation of the sap of the vine will not be retarded, and no suckers will be developed and thrown out from the root, as there would be if the old stalk was cut off at once. The next fall or spring, when the new graft is well grown in, the old stalk can be removed with little danger of suckers. When suckers once start below the scion they are very difficult to contend with, as they are likely to come up year after year. By grafting deep enough below the surface, and allowing the scion to get one year's growth before the old stalk is removed, the probability is that no suckers will trouble.

A NEW enemy to the farmers, more troublesome than the squirrel, has put in an appearance in Kern county. The tule rats are destroying wheat fields by the hundreds of acres. They harbor in the tules and live on the roots, but the high waters this year have driven them up into the wheat fields, and as they equal in numbers the locusts of Egypt, they devour a field of grain about as fast as it could be cut with a machine, and having tasted the soft and succulent grain they will not be content to live on the tule roots while the grain lasts. As soon as the farmer discovers that the rats have commenced on a field, he starts in with his machine to cut his field for hay, and if he perseveres he may save about one half of the crop.

California Agriculturist AND Live Stock Journal.

$1.50 Per Annum.

PUBLISHED MONTHLY BY THE

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S. HARRIS HERRING, Editor.

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The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

Wheat.—It is estimated that there will be 1,000,000 tons of wheat produced in California this season, and that 750,000 tons can be spared for export. This, at only $30 per ton, will amount to $22,500,000.

Wanted.—A Pet Stock and Poultry Association on the Pacific Coast. This is something that every breeder of fine poultry here desires. Poultry breeders will please communicate with the Editor of the CAL. AGRICULTURIST their ideas on this question, and decide at what time and place they will hold a meeting for organizing.

We have been requested to examine a piece of machinery, report upon it, and send in our bill—this by a prominent business house. It means, give it a favorable notice for coin. We shan't do it. It may be a very good thing, but our poor opinion is not for sale. If you want it advertised, do it in a square manner in our advertising columns. No humbug bribery here.

Is Our Civilization a Failure?—We learn that there are women—white women and grown girls—in San Francisco actually working for twenty cents a day and boarding themselves. This is the result of scarcity of money and abundance of Chinese labor. On the other hand, there is more aristocratic extravagance among the rich women there than under any monarchy. We are fast getting to be a nation of lords and serfs, masters and slaves. What wonder that thousands are yearly driven to desperation, to crime, despair and suicide?

The "Temperance Champion" is now owned by a San Jose printer, Mr. Alex. Murgotten, who is making a good paper of it. Send to him for a sample copy and you will say so, too.

Patriotic.—We have devoted our poetry page to patriotic rhymes this July, 1876, for "Uncle Sam's a hundred," and, like every American, we feel like rejoicing for every step that has been taken toward a better condition of things. The Editor "sacrificed a grandfather" in the revolution for independence, and straddled a horse three years in the Union army during the rebellion, and feels brave for his country, so must cheer the old flag in American fashion.

Hot Days in June.—Our hot weather in June commenced a week earlier than usual and was a scorcher. It ripened off the grain and prevented the rust from doing serious damage. Late sown grain, on heavy lands near the bay, which had not filled, was blighted some. Late sown grain will grow as well as early sown, but two years in three it gets caught in the hot days of June and is blighted. Early sowing, as a rule, is the best for grain, as has been proved over and over again, whether in dry or wet seasons. In our office the thermometer indicated 90° five days in succession.

Our Immigrants.—When the Chinese arrive in California the organized Companies take them in charge and provide them with employment. When American and European immigrants arrive overland, they find themselves at the mercy of wharf-rats, hotel-runners and "employment" agents. No way is provided by which they can be sure of good treatment or work. They find themselves at midnight on the wharf of a great city, without friends or advisers, and at the mercy of thieves and tricksters. Why cannot the citizens of San Francisco and California provide a proper reception for immigrants, and establish a bureau of information for their benefit? Are we less civilized than the Chinese whom we wish to discourage? And must we disgust the very immigrants we should encourage, and see them return to escape from "Californians"? What are our Anti-Coolie clubs doing in this matter? What are our humanitarian societies and our Granges doing to encourage the employment and settlement of immigrants from the Eastern States? These are serious questions and should be heeded.

What About the Wheat Market? That there will be a great wheat harvest is certain. The very uncertain thing is about the market. Without doubt there will be plenty of consumers, as the European crops cannot supply the demand, and the prospects appear favorable for fair prices in Europe. But, as to the prices, it will make $6,000,000 difference to the farmers of this State whether the get one and a half or two cents for their wheat. The wheat speculators are all interested in getting as much of this immense profit as possible. This we can set down as certain. And they are so combined as to pretty nearly dictate terms, if not quite. The Grangers seem to have made no combination for shipping since Morgan & Sons failed, and the buyers are bound to make a good thing this season sure. The terrible scarcity of coin is going to give still greater power to buyers in bearing the markets. They will not only control market reports and prices, but almost compel farmers to sell at such figures as they please to give. This is the way the lay of the land looks to us at any rate.

Honey Prospects for 1876.—Mr. J. P. Gowr, of San Diego, writes as follows:

Bee men in this section are much disheartened. The bees swarmed but poorly, and now the sage is drying up; all the vitality seems gone out of it, and but little of it will bloom. As a consequence we shall have but little pure white honey, and the market is already flooded with the dark and inferior article.

In harmony with other land transactions are the Mexican fraudulent land grants tolerated by our Government. Money influence at Washington will carry through almost anything. A dirty greaser's name, an oath, a soiled bribery record from Mexican archives, gotten up for the purposes, and a few lawyers who manage to get the settlers' money while the grant is being launched on greased ways by some American gentlemen of high-sounding name, and the thing is accomplished. Money does it, and rascals take the land. Settlers who have held lands believing them clear, find this grant floated upon them, and must submit to be despoiled. Individual rights are laughed at, and honest men are treated as though they were villians.

Another grant has been confirmed in our county. The people know it is a swindle, but have no power to protect themselves. How can they when money rules? It matters not whether that money come from the grave of the old Adams Express Co. or not, nor how many men were robbed to get it. Of course it must be all right, or how could such a thing occur in our enlightened community and under a people's government! It is about time to celebrate the Fourth of July with something else than blank cartridges, or to emigrate to some heathen country, where laws are made to protect honest men and punish rascality.

Have pre-emptors of lands any rights that Government is bound to respect? According to several rulings of the Secretary of the Interior, of the Supreme Court and of Congress, they have not. We used to think, in our innocent, youthful ignorance, that when a man squatted on unoccupied public land, and declared his intention of purchasing when it came into market, and occupied the same, fulfilling all requirements of law, his claim was good against any party who might attempt to purchase from the Government. But it has been ruled otherwise in several cases. In fact, the poor settler has no rights that Government is bound to respect. Lands are surveyed and thrown into market at the convenience of speculators and monopolists, script holders, etc., who are apparently in collusion with land offices to gobble it up. For some years past it has looked as though the Government was anxious to dispose of the public lands in large bodies at any price. Large gifts of lands to railroads, and any number of grants to institutions of pretended use to the people, scripts, etc., etc.—any way to prevent settlers from getting lands excepting from land-sharks, at land-sharks' prices. It is high time for the people to demand a different condition of things. Every foot of public lands should be held sacred to the settler, in limited quantities, and obtainable in no other way than by actual settlement, under certain restrictions and requirements that will prevent trickery. The Government can raise revenue without forcing sales of large tracts of lands to speculators. We desire to see this Government become what its founders proposed—a government of the people, by the people, and for the people—instead of seeing it run by and for a class of swindling thieves and monopolists. It is a proper time to comprehend this matter and declare for REFORM.

Home Manufactured.—Mr. Joseph Enright has sold the twenty straw-burner engines that he has made, and is turning off two more to order, which is all he can supply this season. These thresher engines are all made entirely at his foundry and machine shop, in San Jose. He regrets that he is unable to make several more that he has calls for, and so do we, for we verily believe that no better engines—in fact, none so good—are made elsewhere. Mr. E. is a thorough mechanic of many years' experience, and knows what is wanted, and does his level best, which is not second to anybody.

Money Scarce.—There is a great scarcity of money throughout the Pacific Coast country just now. Nearly every subscription we receive is on time, with promise to pay in a few months. We do not complain of our friends, only mention this fact to show the general drouth of coin. The question is, will money be plenty after harvest? The masses of the people seem to think it will, but we believe that it will not be. Money is one thing, and property is another. There is plenty of property, and while bankers are studying how to take advantage of big crops and get big rates of interest, we cannot understand how, under our present financial management, money can be very plenty, unless the people bleed liberally for it. That is how the matter looks to us.

Vested Rights.—When monopolists, of whatever description, who, by intrigue, have obtained power through the generosity of the people, come to use that power against the interests of individuals and the people, said monopolists invariably make a strong point of "vested rights." There are inherent personal rights inferior to none granted by men, among which are "life and liberty," the right to "religious conviction according to the dictates of one's own conscience," and "to pursue happiness" without injury to another. But when it comes to granting perpetuity to a wrong, that is contrary to the principles of a free and enlightened government. All rights, in a public sense, rest with the people or else this Government of ours is a stupendous failure. And the people are vested with power to undo that which they have done when they discover that a wrong is resulting from such creation. We concur with the following ideas of the Memphis (Tenn.) "Southern Farmer" to this point:

Those corporations and their champions who prate of "vested rights," and all that, in opposition to the best interests of the great mass of the people, should remember that the power which has given can take away, and therefore it may not prove wise to claim too many privileges. All privileges covered by charters were given for the public benefit. That was the ground on which they were granted. If it were otherwise, then they were frauds perpetrated on society by the faithlessness of the people's agents. The natural rights of the many are greater than the "vested rights" of the few, especially when these last are employed against public policy and to the injury of those who only could grant them legally. Let every human being have his just rights, and let "vested rights" so called, be enjoyed in subordination to those rights, and the best interests of all classes may be promoted. But "vested rights," so called, will have a hard road to travel when they are sought to be enforced in opposition to the greatest good to the largest number.

THE CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL for June is on our table, replete with interesting matter to the farmer and stock raiser. Subscribe for it and you will perform an act which will greatly enhance your interests.—*Solano Republican, June 15.*

Poetry.

Lexington.

BY JOHN G. WHITTIER.

NO maddening thirst for blood had they,
No battle-joys were theirs who set
Against the alien bayonet
Their homespun breasts in that old day.

Their feet had trodden peaceful ways,
They loved not strife, they dreaded pain,
They saw not, what to us is plain,
That God would make man's wrath His praise.

No seers were they, but simple men;
Its vast results the future hid;
The meaning of the work they did
Was strange and and dark doubtful then.

Swift as the summons came they left
The plow, mid-furrow standing still,
The half-ground corn-grist in the mill,
The spade in earth, the axe in cleft.

They went where duty seemed to call;
They scarcely asked the reason why;
They only knew they could but die,
And death was not the worst of all.

Of man for man the sacrifice,
Unstained by blood, save theirs, they gave.
The flowers that blossomed from their grave
Have sown themselves beneath all skies.

Their death-shot shook the feudal tower,
And shattered slavery's chain as well;
On the sky's dome, as on a bell,
Its echo struck the world's great hour.

The fatal echo is not dumb;
The nations listening to its sound,
Wait, from a century's vantage ground,
The holier triumphs yet to come,—

The bridal time of law and love,
The gladness of the world's release,
When, war-sick at the feet of Peace
The hawk shall nestle with the dove,—

The golden age of brotherhood,
Unknown to other rivalries
Than of the kind humanities,
And gracious interchange of good.

When closer strand shall lean to strand,
Till meet beneath saluting flags,
The eagle of our mountain crags,
The lion of our mother-land.

"Our Patriot Flag."

BY GEO. COOPER.

Hark to the tramp that echoes down the ages.
What flag is that now streaming o'er the air?
The soldier's pride, the glory of the sages—
All honor be to thee, Columbia fair!
The standard of Columbia now unfurl,
While here we meet beneath each hallow'd fold;
To tyrants foul our hate and scorn we hurl,
Welcomes extending as our sires of old!

Thy natal day our patriot flag we hail,
Undimm'd in lustre now each star appears
In faith to thee our hearts cannot fail.
While Freedom marshals on the golden years!
The standard of Columbia now unfurl,
While here we meet beneath each patriot fold,
Thy natal day our flag we hail,
In faith to thee our hearts cannot fail!

The mandates of our fathers we should heed;
One hope be ours, united hearts and hands!
O still shall live each grand and noble deed,
Deathless the mem'ries of our glorious land!
Thy refuge keep for all the world's oppres't
Beneath thy folds we march at duty's call,
While Freedom's fire shall kindle ev'ry breast,
With thee we'll conquer, or with thee we'll fall!

The standard of Columbia now unfurl,
While here we meet beneath each patriot fold;
Beneath thy folds we march at duty's call,
With thee we'll conquer, or with thee we'll fall!

SALE OF JERSEY CATTLE.—The auction sale of Jersey cattle by A. Mailliard, at his ranch in Nicasio, last month, resulted in the disposal of forty-five head. The prices ranged from $75 to $250, which, considering that Mr. Mailliard's is probably the best herd of Jersey cattle in the United States, was very low.

Centennial Song.

BY CARL BRENT.

Twine ye a wreath for the centuries!
Forge me a chain for the ages!
Sing me a song that shall echo
Farthest down history's pages!
Bright wreath and stout chain and great song
Passing the wisdom of ages.

Wreath that through summers and winters
Ever shall blossom and brighten;
Chain that though broken or loosened,
Ever shall strengthen and tighten;
Song that in days that are darkest
Hearts of the people shall lighten.

Here is the wreath; the world's wander;
States in their sovereignty twined,
Here is the chain; it is Union;
States in one nation combined.
Here is the song; it is Liberty's,
Best of the births of the mind.

Years that have passed are a hundred;
Never bloomed blossoms so long.
Canker and rust on the iron,
Yet it is solid and strong,
Discords have come; but the music
Clings to the wonderful song.

FERNERY AND FLOWER STAND.

Once the star-blossoms, in fury,
Scattered, flew out of their course;
Once were the stout links severed,
Burst by a terrible force;
Once was the harmony driven
Back to its heavenly source.

Past the convulsion, the blossoms
Multiplied, brightened again;
Quickly the links reunited,
Sundered and broken in vain;
Sweetly the bars of the music
Joined in the wonderful strain.

Fragrance goes forth to all countries,
Fatal to Kaiser and King;
Still to the chain do the peoples
Lovingly, trustingly cling;
Still the oppressed of all nations
Liberty's symphony sing.

Thus hath it been through the century;
Thus shall it be through the ages;
Thus shall the future behold it,
Fairest of history's pages;
Bright wreath and stout chain and great song
Passing the wisdom of ages.

"Uncle Sam's a Hundred,"

Oh, ye Powers! what a roar,
Such was never heard before—
Thundering from shore to shore,
"Uncle Sam's a hundred!"

Cannon boom and trumpets bray,
Fiddles squeak and fountains play—
'Tis his great Centennial day—
"Uncle Sam's a hundred!"

Stalwart men and puny boys,
Maids and matrons swell the noise,
Every baby lifts its voice,
"Uncle Sam's a hundred!"

Nervous folks, who dote on quiet,
Though they're half distracted by it,
Can't help mixing in the riot,
"Uncle Sam's a hundred!"

Brutes that walk and birds that fly,
On the earth or in the sky,
Join the universal cry,
"Uncle Sam's a hundred!"

Well, suppose he is—what then?
Don't let us act like crazy men;
Must we take to fooling when
"Uncle Sam's a hundred!"

There he stands—our modern Saul—
Head and shoulders above all;
Yet "Pride goes before a fall,"
E'en though one's a hundred.

"What's a hundred in our day?"
Foreign Uncle Sams will say;
"Let us sit and watch the play—
He is but a hundred.

"Granted he's a shapely youth—
Fair and ruddy—yet, forsooth!
He's too young—and that's the truth—
Only just a hundred.

"When he's twice as old, pardie!
'Twill be easier to foresee
What will be his destiny.
Now he's but a hundred.

"When he plays his boyish pranks,
Should he seek to join our ranks,
We'll reflect. But now—no, thanks!
Why, he's but a hundred."

Yes, our Uncle's years are few;
He is young—the charge is true;
Let us keep that fact in view,
Though he counts a hundred.

Don't let's tempt him to ignore
Warnings that have gone before;
Perils both by sea and shore,
Now that he's a hundred.

Let us strive with earnest heart,
Each of us to do his part,
So that he may scape the smart,
Seeing he's a hundred.

And with solemn, graceful thought
Of the deeds that he has wrought,
Guided, cherished, favored, taught,
Till he reached a hundred.

Let us, as we vaunt his worth,
Mingle soberness with mirth,
While we shout to all the earth,
"Uncle Sam's a hundred!"

Ode to Jonathan.

BY JOHN BULL.

I sing a Yankee, latest human growth;
A hero seldom stupid, slow, or flat,
But often over sharp, or fast, or both—
A self-willed, many-titled Democrat,
Squire in New York, and Captain in the West;
A Judge on California's golden strand;
In the Sunny South a Colonel, at the least;
But Deacon in the true old Yankee land.
A rapid traveler to walk with,
Alike through flowers and thorns bound to get
Easy to trade, or drink or talk with, [on;
But very hard for any one to sit on.
Who storms a battery like an old crusader;
Gives freedom to a race some careless minute;
But would buy Satan's homestead as a trader,
And ardently aver "There's millions in it."
To whom equality's a precious gem;
Though sometimes he may kick Chinese or darkies,
And in his secret bosom doth contemn
All foreigners—below the rank of marquis.
In Maine, who ranks in Calvin's fire-proof class;
In Kansas worships God with strapped revolver;
By the dances, in New Orleans, after mass;
In Brooklyn sobs a tear-o'erflowed dissolver.
Who thinks a schoolhouse is a sacred place,
And education cures all mortal phthisics,
But looks askance at high scholastic grace,
In Greek and Latin, French and metaphysics.
Heedless what charm on painted canvas glows;
Indifferent, off to strophe and to stanza,
But listening with loving ears who blows
The western wind from newly-found bonanza.
Yet who, though willing after gold to dash
Through sea and fire, and gloomy ore-lined cavern,
Not often hoards his hardly-gathered cash—
But nobly builds a fourteen-story tavern.
Such is the subject of these brief remarks:
A lawless, pious free-souled money-maker;
Who his cigar would light at Pluto's sparks,
And then try buying heaven by the acre.

The Centennial Hymn.

BY JOHN G. WHITTIER.

Our fathers' God! from out whose hand
The centuries fall, like grains of sand,
We meet to-day, united, free,
And loyal to our land and Thee,
To thank Thee for the era done,
And trust Thee for the opening one.

Here, where of old, by Thy design,
The fathers spoke that word of Thine
Whose echo is the glad refrain
Of rended bolt and falling chain,
To grace our festal time from all
The zones of earth our guests we call.

Be with us while the New World greets
The Old World, thronging all its streets,
Unveiling all the triumphs won
By art or toil beneath the sun;
And unto common good ordain
The rivalship of hand or brain.

Thou who hast here in concord furled
The war-flags of a gathered world,
Beneath our Western skies fulfill
The Orient's mission of good will,
And, freighted with love's golden fleece,
Send back the Argonauts of peace.

For art and labor met in truce,
For beauty made the bride of use,
We thank Thee, while withal we crave
The austere virtues, strong to save,
The honor proof to place our gold,
The manhood never bought or sold!

O! make Thou us through centuries long,
In peace secure, in justice strong;
Around our gifts of freedom draw
The safeguards of thy righteous law,
And, cast in some diviner mould,
Let the new cycle shame the old.

A simple and effectual remedy for the prevention of milk turning sour in summer consists in adding to each quart 15 grains of bi-carbonate of soda.

City Gardening.

TIMELY HINTS.

NOW that your plants are all growing —after the season of planting, etc. —a few timely hints as to summer care will suffice for this month.

See that your heavy plants are properly supported with stakes and strings, and provide trellaces for climbing plants, if not already attended to. The skeleton of an umbrella, a clump of brush, and many other things, when covered with climbers of various kinds will look pretty.

Water, and plenty of it, is the great esiential to success in the garden during the hot months, particularly out of doors. The growth of plants, during hot weather, requires a constant supply of moisture. They might be able to live with little, but the growth would nearly cease, the foliage on the lower stems of plants would turn yellow, and very few blossoms, and poors ones would result. With all the water they want, the growth will be vigorous, the foliage heavy and green and the flowers profuse and beautiful. Generally too little attention is given to this subject of supplying water in proper quantities. In cool spring weather but little watering is necessary for plants. It is then easy to give too much. The plants are usually small, and the loss by evaporation from the leaves slight. Now with full foliage, and a very drying atmosphere, the case is very different. It is a good thing to mulch the surface of the soil with saw dust, tan bark, or sand, to prevent it from drying out quickly, and to keep it cool, Keep an eye on the weeds that they do not absorb the moisture and richness of the soil and crowd the plants. Wash the dust from the leaves with a sprinkler, or a brush dipped in a bucket of water. And again we say, give the plants plenty of water. Don't neglect them a single day.

House and pot plants need an abundant supply of water also, but remember that it is not a good plan to keep water standing in the pans which the pots set in. It is likely to get stagnant and do injury to the plants. Water your pot plants in the top of the pots, and allow them to drain. Hanging baskets need a daily bath, moruing or evening, in a tub, besides a cup of water at mid day. A spoonful of ammonia in a quart of water once a week is a good excitant of growth.

MISTAKES IN FLORICULTURE.—It is fifteen years since I commenced gathering material for flower a garden, and the loss of time and money suffered in the effort to make my garden what it is, prompts me to publish something of my experience for the benefit of others. Of my failures I am not ashamed, for they were only incideuts in honest endeavors for success.

My first mistake was in getting too many kinds of flowers—a very common fault with beginners. The catalogues were faulty in not noting the periods at which the different varieties would bloom. Consequently I had the same shade of colors and form, in Asters, Dahlias, and Zinnias at about the same time—and so with many earlier flowers. I have learned that *one of a class* of flowers, with a full variety of its colors, is enough to bloom at once; and that from three to five classes may be represented at the same time.

My second was a mistske of proportion. I obtained too many annuals and bedding plants. At the end of the season I found that, with the annuals, I was left just where I commenced—with nothing but seeds, and not even those should they fail to ripen. Bedding plants proved expensive, both to procure and to care for. Three of the best double Geraniums and two double Petunias are enough, and if they did not bloom all summer would most certainly be too many.

My third mistake was in getting too many small flowers—in the style of the low Lobelias. It is a very difficult matter so to arrange a garden as to have low small flowers appear to advantage. A flower garden should be showy, and to make it so, showy flowers must be employed.

My fourth mistake was a big one. I mixed things; and here the laugh come in—though it has been a great while coming. I mixed annuals, biennials, perennials, and bedding plants. All sorts, low and tall, were put just where there might be convenient room for them —and the effect was perfectly stunning. It was as if I had mixed the different kinds of seed in a bag and sown them broadcast. It did not take me long to decide that something ailed that garden. I could see the Portulaccas by going behind the Dahlias; while a strong hedge of Balsams and Zinnias stood on guard before the Verbenas. Could I have changed the ends of that spot of ground I would have done it. This being impossible, I concluded to wait another year and change the arrangement. I did this, but it proved no better. The perennials got in the way—and as I was adding every new thing that I could get, chaos might have been deemed order as compared to my garden. Some of my friends said it was nice, and perhaps they thought so. But others thought I had reached the extreme of insanity—and well they might; for the whole thing was so exactly arranged that I never could tell where anything was till it presented itself, and sometimes was well grown.

At this point I might write another chapter. The points I wish to make would render this one too lengthy. Perhaps I ought to say that during all these years I made the natures and periods of blooming of the different kinds of perennial plants a special study—and I now know that no class of flowers will give such thorough satisfaction as a really good selection of them. They are always ready, and, whether the season be early or late, they come along and bloom about the same time every year. Thus you can calculate with certainty what flowers you will have in each week of each month. This cannot be said of annuals and bedding plants, for seed is uncertain and our climate variable. But perennials are sure, and need little care. We have, withal, so many kinds that the garden can be made gay with them from winter to winter.

For beginners I would suggest the following short negative rules as ensuring success:

Do not get too many kinds; some will be neglected.

Do not get too many of a kind; they will weary the eye.

Do not get too many bedding plants; you can buy perennials for the same money, and they will last.

Do not get too much small trash; it will not show.

Do not mix low and tall; it destroys the effect of both.

Do not plant too much ground; there will be sameness.

Do not neglect to care for them; flowers like company.

Follow carefully these negatives, and, as surely as the rain falls and the sun shines, you will succeed.—*E. Hufflelen, Le Roy, Genesee Co., N. Y., in American Garden.*

Sheep and Goats.

CALIFORNIA BRED MERINO SHEEP.

HISTORY shows that centuries ago fine wool was in demand for manufacturing fine fabrics. The Merino of to-day is the result of ages of pure breeding—that is, selecting the best fine-wool sheep to breed from constantly. Within the last hundred years, however, more care has been taken in the direction of improvement than ever before. And in America the Spanish Merino has reached its greatest excellence. Vermont has sent to California finer Merino sheep than Spain ever sent to America. Our herdsmen can, some of them, show, when it comes to superior growth of carcass, finer sheep than ever grew in Vermont. Some have declared that the wool deteriorates in fineness in our climate, but where care in breeding is used, such cannot be the case. The impression seems to have gained ground from the fact that the common sheep of this coast, brought from Mexico, were coarse-wool sheep, and although they have been bred with Merino rams for some years past, there are many coarse-wool sheep among them yet. Pure-bred Merinos in our climate are as fine as any produced anywhere in the world. In this connection, we ask anyone doubting it to examine the wool upon the backs of Merinos belonging to B. F. Watkins, of Santa Clara. His stock is from the best imported Vermont stock, bred with reference to superior fineness, and is certainly equal to anything that can be seen in any colder climate.

THE LATE IMPORTATION.—Harrison G. Otis, editor of the Santa Barbara *Press*, a gentleman who has taken a good deal of interest and who's well posted upon Angora Goat matters, publishes the following in relation to the recent Harris importation, which is sound and to the point:

A press telegram says that "John S. Harris, of California, arrived at Baltimore a few days ago with twelve Angora goats which he brought from Asia Minor after a difficult journey lasting a year. They have already cost him $525 apiece. Harris hopes to make them profitable in the Sierras of California." This is an illustratism of how difficult and expensive it is to import this valuable stock from the distant home of the race, nine or ten thousand miles away. The telegram curiously adds: "This is the first importation of the kind"—which it is not, by any means, as is well known. (That information is exclusively original with the Intelligent News Agent.)

With a fair field for this promising pursuit, and a moderately numerous stock of pure-blood and thoroughbred animals to work with, which California breeders now have, they can breed Angora goats cheaper and better than they can be imported. It has been demonstrated by practical test that the thoroughbred California Angora is even superior to his Turkish ancestor in all the essential points of excellence. Careful comparisons made by us of this fiber from the two countries leads to the deliberate conclusion that the California-grown mohair is superior to the Turkish product in the three essential particulars of length, fineness, and luster; and we believe the average weight of the clip from animals of the same grade and quality is greater here than in Asia Minor.

It is a mistake to suppose that there are no grade Angoras in Asia Minor, the same as in America. Investigation shows that the different breeds of fleece-bearing goats in that country number some twenty. Of these the Angora and one or two others are confessedly the finest. These different breeds are more or less intermingled in some districts. The result is, grade fleeces and a marked difference in the quality of the mohair produced. This is shown in the wide range of prices exhibited by the quotations at Constantinople, the market for Angora, and also at Bradford, the principal English market.

Notwithstanding what has been said in favor of home breeding, importations are to be encouraged by all means. The great point is to get the best blood and to increase the numbers of our flocks, so that the annual yield from them of good, merchantable combing mohair will be sufficient in a few years more to make a decided impression upon the productive results of the State and country.

The Angora takes most kindly to the climate and herbage of California, and is steadily winning his way.

[In regard to this importation, the goats arrived in San Jose in good shape. They are a little smaller than California grown Angoras, but are fine animals. We have endeavored to gain the audience of the proprietor, Mr. Hall, and learn full particulars of this importation, etc., but for reasons best known to himself he is reticent, so we rest the matter for the present.—ED.]

IMPORTANCE OF PURE-BRED RAMS.—The introduction of pure bred rams will annually increase the fleece of flocks one-half pound per fleece. Could farmers be induced to reflect on the importance of this increase, then I have not written in vain. I care not where they purchase their rams, so they get them from a good flock. One to three rams annually do not cost much money, and yet an increase annually of one-half pound becomes an important item.—*Ed.*

A General Complaint.—Here is one of at least fifty letters from all over this State received within the past month by the publishers. We give it merely to show how hard money matters are everywhere. What is the remedy?

PUBLISHERS AGRICULTURIST:—It is a shame that the owner of nearly three hundred acres of land in so fertile a valley as this should be so cramped for ready cash as not to be able to send the pay for the AGRICULTURIST, so small an amount; and though my attention has been twice before called to this matter, each time I have said to myself "hold on a day or two and money to send will be easier with me." But times have not grown any better in this respect. Please continue to send the paper, and I will try to get the money for you before the end of this year.

Yours, truly, O. B. O.

Purify the Press. — A subscriber writes as follows:

I like the CAL. AGRICULTURIST very much indeed. If we could only purify the sources of information, the newspaper press generally, so that the masses of the people learned only the truth; if the coadactors of the press could be prevailed upon to quit coloring things to sustain their own side of public questions, to quit publishing with favorable comments quacks and quackery, humbugs and humbugry, and give us only that that is solid and reliable, society would make a big bound forward and upward; crime of every character would be lessened fifty per cent. in the next decade. N. JONES.

Correspondence.

LETTER FROM KERN ISLAND.

Ed. Agriculturist: Reading the articles of your San Jose correspondents in reply to Mr. Barrel's critique, reminds me of the word-war some years ago on pruning. Both parties are right, or very nearly so. Twenty years ago I was a strong advocate of the subsoil plow, and on lands in Alameda county produced the most satisfactory results by deep culture, causing the land to retain so much moisture that a crop of potatoes, planted the first of June, did well and made a fine yield without rain or irrigation, and a wonderful growth of vegetables was thus produced.

I took that "hobby" to Pennsylvania, and there subsoiled a large field of yellow clay soil eighteen or twenty inches deep, using three and four yokes of oxen —expense, twenty dollars per acre more than ordinary plowed land beside it. I next took the subsoil plow—an invention of my brother's superior to anything of the kind I have seen (no patent on it)— to the rich land on the plains of Tulare county, expecting to put the soil in such condition that irrigation would not be needed; but there it failed me, and after repeated trials I laid the subsoiler one side, and found six inches as good, or better than a foot. So I think, perhaps, both your correspondents are right.

I believe in will be of use on this Kern Island land, and hope to try it another year, then look for accounts of growth. Some of the land may not need it, for to-day I saw a peach tree that was planted last year, when it was less than an inch in diameter, that is now about as large as a New Jersey peach tree at five years. I wish I had measured it for you.

I think this Island about the best place for a man to get a start, if the child will let him alone, and though we came here at the worst time of the year for that disease, it was not so bad as represented —bad enough, but with the help of the "specific practice" of medicine introduced by Dr. Scudder, of Cincinnati, we can manage. Aided thus, we hope to keep moving until the health of the country is improved by clearing the land, planting gum trees, etc.

I will introduce your journal to all my friends. Farmers do not read such papers enough. Yours,

Isaac B. Rumford.

WORKING FOR TEMPERANCE.

Way-Side Watering Places.

Dear Editor: Have you room for an idea about temperance *work?* If the best of lectures and noblest of tracts could make this world virtuous and temperate, the work would be nearly done. But lectures and tracts contain the theory that needs to be followed up by earnest, self-denying hard work and cash outlay.

I once heard of a noble woman who was devoting time and money to the distribution of tracts among the outcasts of a great city. She met a poor child still following the road to destruction and reproachfully said to her, "Did you not read the warning tract I gave you?" "Yes," retorted the girl; "but I could'nt *eat* it, and I was hungry."

In the race for souls, since the world began, the devil seems literally to have had possession of the inside track. Good advice comes plentifully and earnestly from the elect, but the square meals are too often furnished by the devil. I am aware that "the Lord's people," in many of the large cities, are fast waking up to the necessity of taking this inside track out of the hands of the devil and using it for God's glory.

I wish to suggest an investment of some of our missionary zeal and money that would relieve the tired, dust-choked, and in many cases sin-stained traveler from the necessity of calling at the corner grocery for a drink, where often if he takes water it is so warm and unwholesome that if he has a "bit" he is tempted to take a glass of more loathsome drink to wash the water from his mouth. Even if he finds a wholesome drink of cool water, a few meaning glances of "Bar-keep" will make him feel mean if he enjoys a few moments' rest and leaves no cash as he walks on.

I believe twenty-five earnest, patient, temperance men, owning water tanks near the public roads in different parts of the county, could head off two hundred drinks of liquor per day during haying and harvest.

A piece of ground ten or fifteen feet square, thickly shaded by trees, vines or other shade, provided with some sort of stationary seats, a barrel or small tank filled with water cooled by slowly running during the night from the irrigating tank, and a bright, new tin cup secured to the tank by a chain, would be the first, and perhaps least part of the investment in behalf of those needing the "cup of cold water," for tramps and hoodlums would sometimes steal the cup, let out the water and foul the place made for their comfort. Gratitude is not the heathen's first sentiment. If he lives in the south sea islands he may eat his would-be benefactor; in California he is very apt to insult and plunder his best friends.

Could these cool water resting places become one of the institutions of the country, and be furnished with enough water for the use of horses, they would do much towards regulating the water supply that is placed by the roadside, not for the sake of the weary, thirsty animals, but for the chance to sell their drivers a drink.

That part of a pleasure ride endured by the lady sitting in the buggy subject to the stare of from one to a dozen pairs of red eyes whose owners are smoking and swearing on the porch whilst her gallant is watering the horse and making his acknowledgments to the "bar-keep," is not the pleasantest part of the ride.

A "well-to-do Mr. Hayseed" might get into the habit of leaving his daily paper, after reading it, alongside the cool water, for even time enough to rest and look over a paper would be no loss to a homeless man looking for work.

It would be a proper place to post a notice of where work could be had.

It might be a good business investment where fruit is sold from the orchard, as a locked door could be controlled by the orchardist, and an order box like a drop-letter box be made to receive a customer's order as he drove into town, and his fruit be ready for delivery on short notice as he came back.

There are other benevolent, sanitary, and Christian items easily connected with this matter, but this article is already too long.

In the above I aim no shaft at the legitimate country store or wayside inn. I would help a traveler to avoid the watering place *established for the purpose of selling liquor.* C. A. W.

Cozy Nook, June, 1876.

COOL WATER.

Ed. Agriculturist: Have you room for a few lines about cool water, and a few hints about how it can be easily supplied on every farm?

Our nights are so cool that a small stream of water running slowly a few rods will become cold enough to be very refreshing all through the day.

The arrangement may be very simple and cheap. Two syrup barrels and forty feet of trough will do it. The barrels will cost about two dollars, and should be thoroughly scalded and washed to take out the syrup taste. Set one near the water supply, and fill it. Set the other in the best cool place within reach. Hop vines will grow and cover an arbor for the barrel very quickly. Leave the shelter open on the north side. Before going to bed at night turn the faucet at barrel No. 1, so a small stream will run to No. 2, at the same time draw off the water left over in No. 2 to moisten the surrounding shelter.

The plan can be modified to suit circumstances. The water may be located in the milk house, but should be so arranged as to leave no permanent dampness about the floor. Where there is a tank raised from the ground a small pipe can be inserted and the water run any desired distance, and the larger the body of water thoroughly cooled by the night air the cooler it will keep through the day.

I have practiced for years drawing a barrelof water out of my irrigating ditch, taking care to fill the barrel in the morning before the sun shines on the ditch. I never doubt its paying for the bother we have only to neglect to fill the barrel one day and we have no doubt about it rfterwards.

In the cities where ice is plenty perhaps a tank of cool water is not so necessary, yet I think there are many places where its cool waters and surroundings would be welcome. Where the city water comes into the chambers it would be easy to pass a small pipe through the wall and around the house into a lower room provided with a tank that would have a cooling infinence on the whole house, and by passing the water through a filter before ft entered the tank it would be improved in every respect. C. A. W.

Cozy Nook, June, 1876.

Stock Breeder.

FINE STOCK and INTELLIGENT FARMING vs. RANCHING.

MANY persons here and in the East who read about stock raising in California seem to have an idea that it must be very nice to get hold of a few thousand acres of wild hill lands and cover the same with stock *a la Mexicana.* But we who have resided on this Coast for years have seen reasons for harboring a different opinion. There was at one time an excuse for this loose method of ranching, when the lands were open and without settlers, and not in demand for settlement. The old *vaqueros* could better afford to take their chances of losing by drouth the increase of years of plenty. And if the cattle could live through short feed the hides and tallow when it was flush would pay well enough to satisfy an indolent ambition. Such stock raising has about ceased to be desirable in this State. Only a few half-civilized adherents to it are to be found. Slowly and reluctantly they have fled before settlers and the no-fence law, which forced stock-owners to take care of their stock and not allow them to eat up the farmers' crops with impunity.

These old stock ranchers have been the worst enemies the real settler has had to contend with. Any advance that has been made upon public lands that they have ranged over, has been stoutly resisted in every way they could contrive by trickery and persecution. Within a few years—just prior to the no-fence law, which we made enemies as well as friends by advocating—it was as much as a man's life was worth to pre-empt and occupy such lands. The settlers' crops were destroyed, and armed men would threaten, and often execute threats, with pillage, rapine and murder. Nothing less than a colony, or strong combination of armed settlers, backed up by law, could protect them from all sorts of abuse and damage from these cattle and sheep herding land monopolizers. They made no improvements upon the lands, and little or none in their own herds, but generally were content to, Arab-like, prowl over the plains a wild, pastoral people. They combined, as much as long distances would admit, to hold their "vested" rights. But thanks to the pluck of a few daring spirits, and to advancing civilization, they are fast succumbing.

As they retreat before cultivation the real stock interests of the country advance. With cultivation comes a higher branch of stock farming—better breeds of stock, better pastures, and something to eat when pastures are short. A diversified system of intelligent farming is always favorable to stock raising and stock growing, and to improvement in the breeds of stock.

Until very lately our breeders of fine stock as a specialty could find no encouragement in their business. Several persons from the East who have come here with best breeds have met with nothing but disappointment. They supposed that this State, being a stock country, would furnish a market for their fine breeds. But they have found that it requires civilized men to appreciate and patronize the best stock. As the cattle men are obliged to contract their herds before the encroachments of settlers, some of the most enterprising have purchased fine stock to breed up their scrubs a little. But, as a general rule, the farmers who till the soil are the ones who demand better breeds and make it pay to improve. Every alfalfa field creates a demand for better stock. Every well-conducted farm needs better stock, and the better the system of farming the greater the need, and the demand also.

During a portion of the year only the uncultivated lands afford valuable pasturing. We know of several valley farmers who also own hill farms where they turn a portion of their stock during good pasture, and provide feed on the valley farm for them to eat during the balance of the year. They find it a money-making business.

Another element against stock improvement is the *all-wheat* rancher. There is no improvement of any kind about such an one, only to get the best machinery to run things on a grand scale. He may make money, or lose it. He is a chance-taking farmer, and regards his undertakings as a speculator in mining stocks does, as either a winning or a losing game. He is just one step, and only one, in advance of the wild stock raisers, and must eventually give way to a better system. He stands in the way of settlement, and as long as the big land monopolists control things and obtain high rents for lands for such pur-

poses, settlers must stand back. When civilization surrounds them and advances the price of these large tracks, and the degenerated monopolists die, and in the course of time titles split up and naturally fall to pieces, then will these lands become peopled and improved.

At the present time the out-look for fine stock interests of all kinds in this State is encouraging, notwithstanding the fact that the late annual sale was a failure. There were several reasons why besides those we have already given. The interests of the fine stock breeder with those of the good farmer are identical. Both are aiming to improve. The intelligent farmer must have the fine stock, and will eventually. There is no question about that. Let the breeder of fine stock lend his encouragement towards a better system of farming, and let the enterprising farmer patronize the intelligent and scientific stock breeder, and let both take and read the CALIFORNIA AGRICULTURIST, and we may all be happy yet.

CLOSE BREEDING.—Here is what we regard as sensible talk. Breed good qualities regardless of relationship. A writer in the *Western Farm Journal*, after alluding to a discussion on the subject by the Stock Breeders' Association, says: It has been supposed destructive to good breeding to go into any of the forbidden degrees of relationship. If a neighborhood was enterprising enough to buy a fine bull, or horse, at great expense, after a certain time the animal and all his progeny must be discarded for fresh blood, which must be imported at a further increased expense, or the original improvement went for nothing and was lost. In this way, many good breeds have been frittered away and wasted, because the importation could not be kept up and maintained indefinitely. This position is nonsensical in the extreme, as every intelligent breeder ought to know.

How was it possible for Bates, or Webb, or Bakewell, or any of the original improvers of stock, to maintain the superiority of their breeds? They had no other choice strains to run to, if they had desired to do so ever so much, for there were none in existence. It is more than probable that, if there had been, they would have kept on as they did, for when they once got a good animal, they carefully preserved all his good qualities by breeding to others possessing, as near as possible, other good points. They were compelled to do this regardless of relationship for the reasons above stated.

It is now quite certain that the only way to maintain a choice breed of stock is to keep up the intercourse between them, regardless of relationship, so long as there are any good qualities worthy of preservation. Any system of breeding which is based on any other principle is founded on error, and is sure to fail, as so many of our previous attempts at improving Western herds have failed.

The true principles of breeding necessitate pruning the herd, therefore all female animals are endowed with a time of heat, which faculty attracts the males of their kind, and inaugurates nature's requisites to the perpetuation without deterioration. Of wild animals the pruning of the herd is successfully accomplished by the fighting of the males unto death or banishment from the herd, leaving the most vigorous males to propagate their kind; the buffalo, elk and deer are instanced, showing no deterioration either in form or vigor, and fairly represent nature's standard, which is perfection, matured by the true principles of breeding in line, and concentration of blood to that extent necessary to perpetuate merit.

In breeding it is a correct principle to avoid the same defects on both sides; care should be taken to balance defects on either side, with perfection on the other.

OVER-FEEDING FINE STOCK FOR SHOWS. It is astonishing that breeders will be so foolish as to still continue the practice of stuffing, to their ruin, valuable animals from their flocks and herds, simply for the purpose of outshowing each other in monstrons fat at the agricultural fairs. See, for example what dsstruction has resulted for years past from this cause in the noble tribes of Bate's and Booth's Short-horn cattle. It is not surprising that many have died under this practice; the only wonder is that a single animal of them has survived it, and is still left with sufficient stamina to propagate its species. In a late issue, the London *Agricultural Gazette* observes that this lamentable destruction is going on in other superior families of Short-horns, and also in other breeds of cattle, for it says: "Mr. Outhwaite has lost his celebrated cow Vivandiere. She and her calf have both died during protracted labor. The North British *Agriculturist* of last week enumerates the disasters which have of late befallen prize animals. Among them, Mr. Kennard's Queen Mary, which has lost her calf; Mr. A. H. Browne's Duke of Aosta, winner of many prizes, including the first at each of the three national meetings in England, Scotland, and Ireland, last season; Lady Pigot's Victoria Victrix, Rose of Wytham, and Moorish Captive, all of them royal winners; the Duke of Buccleuch's prize winning Ayrshire cow, and Mr. Scott's fine polled Angus bull Bluebeard. We rather suspect," says the *Gazette*, "that the unnatural state of feeding in which showyard animals now-a-days appear has had not a little to do with the death of some, if not all the animals particularized."

Yes, indeed, you may "rather" more than "suspect" this, for it is a terrible fact, and no mistake about it. I well recollect when present at one of the royal agricultural shows in England of expressing astonishment to a celebrated breeder there that he should sell a lot of his prize animals to a competitor. "Why," I exclaimed, "in a few years he will be exhibiting here against you, and beat you with the produce of your own weapons." He gave me a nudge with his hand and a sly wink with his eye, and at the same time dryly remarked: "Never fear that. These animals have been fed too high to make good breeders; the purchaser of them can never beat me at a cattle show with their offspring."

And still, with such a lesson before us, we Americans are so foolish as to continue importing prize stock from abroad, and boast of it to the public, thinking thereby to be able to sell their produce at a much higher price than such as come from animals that have not gone through the injurious process of overfeeding, in order to make a foolish show of their fine points.—*A. B. Allen, in the American Agriculturist.*

[Here is a subject for the California Stock Breeders' Association to discuss. Several head of fine stock have been lost in California from this cause. It would not be a bad plan to rule out all animals that are too fat from competition in the ring altogether.—ED.

MANAGEMENT OF LARGE BULLS.—All stock breeders know that large bulls have a perfect disregard for fences, and therefore have to be kept in the stable, sometimes for years. Experience has shown in most cases where bulls are kept so confined, without air or exercise, that they become either impotent, or very precarious stock getters, also headstrong and dangerous to handle. I kept a Short-horn bull six years. When he was a year old, I began handling him with a rope similar to one ordinarily used to cast a horse. He would make great resistance, and after a struggle would have to come down. I repeated this every six months that I had him, and he never knew that he had any strength. His lofty head was leveled to the ground in a manner very humiliating to him; he was always as kind as an ox, and any child could lead him to water. Throwing him took the conceit entirely out of him.

I then invented a plan to exercise him. I set a post in the ground about three feet high, with a cart wheel on top, then lashed a sixteen-foot ash pole across it, made a frame for his neck at the end, so that the pole would lie against his breast with a rod running out in front to tie his strap to. He very soon learned to go round, describing a circle thirty-two feet in diameter, with a good track. He was put in this every day, and would walk two hours. After a few days he needed no attention, as he seemed to enjoy it, and was so impatient to start that we could hardly hold him still long enough to tie him.

The result of this was that he was the most active bull I ever saw; and out of eighty-seven cows served this summer he was four years old, only four missed. Some of my stock breeding friends have tried these experiments, and say that they have been the means of prolonging the usefulness of their valuable bulls for years. We all know that far too many of our high-priced and choice bulls go prematurely to the shambles in consequence of the above troubles.—*Cor. Country Gentleman.*

ADVANTAGES OF RAISING STOCK.—Farms which are devoted to raising stock that consume the crops grown upon them are less rapidly exhausted than those from which the crops of grain or hay are sold. Upon farms where the grain, hay and straw are fed to stock, the farmer may realize a double profit. First, by the profit arising from the sale of his stock; and second, from the larger quantity of manure he makes and applies to the improvement of his fields and thereby increasing the quantity of grain, and thus he is enabled to add to the number of his stock.

PROFITABE GRADES.—One of the great causes of disappointment, says a correspondent of Coleman's *Rural*, to those farmers who attempt to improve their stock, and then are dissatisfied with their success, is because they work on the cost-nothing plan, and get the cheap kind. That is, they start their improvement by getting a grade of its kind, ignoring the fact that the pure-bred animal, when coupled with the grade, or cold blood, produces an offspring that cannot, with any certainty, reproduce its like in form or fattening properties. Many men will ask, Why is it so? It is because the pure-bred has been the result of scientific breeding and feeding for a limited time, while the scrub has been an amalgamation of races from generation to generation, without an effort to improve those essentials that make them profitable to the farmer. A pure breed can be raised just as cheap as a mixed breed. Each breed has its peculiar characteristics; and the farmer must first ask what he wants in an animal, or of an animal, and then get the breed that most nearly meets his wants. Then he wants to keep it pure. By buying pure males occasionally, if he is not able to do more, he can keep the breed pure, and keep it improving, too, if he uses care in his selection of breeding animals. Then, if he has male or female animals to sell, he can get as good prices as he has had to pay. He can sell his stock for three or four times what it is worth for meat. It costs him no more to raise it, and any surplus stock he has, he can convert into meat just as well as the mixed breeds:"

HOW TO EDUCATE A BULL.—The *Country Gentleman* says: A bull should always be so fastened that he cannot strike his attendant with his horns. He should always be handled with a staff fastened in his ring, and be taught to obey when led, just as a horse is taught. If he shows the least disposition to use his horns when being led, a twist of the staff will teach him better. He should be handled in the stable as a horse is taught to be, and should, for the sake of his health, be carded and groomed to his feet, as is a fine colt. When currying his head and neck, always have a firm hold of his ring, and never allow him to think he can push, hook or even frighten the attendant. Always keep him well groomed.

ARE TENDENCIES OF CHARACTER INHERITED?

BY NELL VAN.

"WE do not live for ourselves alone," said a mother whose pathway through life was not entirely strewn with roses.

The words sank deeply into my heart, and I love to feel that they are echoing and re-echoing throughout space for an eternity. If we fully realized that those who come to fill our places upon earth, bearing our blood in their veins, and with it the transmitted traits of character and peculiarities of temper we possess, would we not be more constantly on our guard, and strive more heartily for perfection? The atmosphere becomes tinctured with the prevailing sentiment of our lives, and the harmonious blending of contentment, forgiveness and sympathy, with no nervous anxiety about the future, produces a condition of peacefulness that all might envy.

Such thoughts as these were passing through my mind as I sat in a friend's house, whither I had gone to pay a brief visit, when I heard a child's plaintive voice in the entry saying: "Do, ma'am —*please* do let us come in; we are afraid to go home now, and if *she* see us we'll have to, and oh—" A flood of tears here relieved the grief-stricken little heart, while, with kind, soothing words from my friend, two little forlorn specimens of humanity were led into the sitting-room.

A bright, cheerful fire burned in the grate, and Aunt Liddy sat in the soft twilight knitting. Seats were placed where two pairs of chubby hands might feel the warmth of the fire, while little by little we ventured to draw from their owners the tale of sorrow which led them to seek shelter under my friend's hospitable roof.

"There she goes now!" said one of them, pointing through the window. "She's looking for us. Oh! ma'am, don't let her in here."

"No," said my friend, "you are perfectly safe here. But is she your own mother, child?"

"Yes, indeed, and a kinder one you never saw when she's in her senses. The man in the shop there always gives her a drop too much, she says, and then she never knows what she's about after that."

Then the younger one spoke up, "And she sings, and boys follers her and chuck rocks at her, and she fall down, and the mans come out of their stores and tells her to stop her noise and go along. And she gets up and sings louder. See, lady, she is going through the park awavin' her handkercher. Oh! won't we catch it, Polly when we get home, unless we wait till her is asleep?"

My heart ached for the little souls thus dwelling upon their early grief, and my eyes followed the clumsy movements of the woman they dreaded, who, lost to all sense of shame, was attracting the attention of passers-by with her loud, coarse laughter and wild singing. What more repulsive sight than a woman thus degraded!

Aunt Liddy had risen and gone to the window, where, shading her eyes with one hand, she sadly gazed and sighed, then muttered, half aloud, "Poor, forlord creatur! Nobody to save her from herself. Lor' sakes alive! Marian, if she don't look like Mirandy Jones as lived at Newton Corners. Don't you mind the Joneses as had such a heap o' trouble with your uncle Hi about land? Well, Seth Jones he married an old schoolmate of mine, and Mirandy was one of their first children. The oldest was a boy, and he sickened and died. Mirandy she"—

"Yes, that's what Gran'pa calls her now, Mirandy, and he lives down at the Corners, and we was there once, but they wouldn't keep us no longer, 'cause father fit with their hired man, and so—well, we come away arter that," interrupted the little one.

My friend here stooped down to soothe the children by coaxing words. She enquired their father's name, and what he was doing.

"Oh, he works on the railroad, and sometimes he comes home, and more times he doesn't. Then he stops at the shop, too, and gets a drop, but then he goes to sleep there, and maybe don't come home till mornin'—leastways we are mostly gone to bed afore he comes,so we gets no floggin' But she beats us, you'd better believe. Onct she hurted Polly's nose till it bled, and I runned away. Oh! dearie me! I wish—I wish my mother was like you, and never drinked a bit nor beat us!"

"Here, durlints," said kind-hearted Biddy, coming into the room with two saucers of strawberries, with a piece of sponge cake and a spoon in each saucer. "Dry your tears now, for the lady here told me to bring this to yees, the purty childers."

The sight of the fruit brought smiles to the lips and tears of gratitude to the fringed eye-lids. Polly shook back her tangled curls, and said "Thank you—thank you. Aint they nice ladies, Betty? Why don't you tell 'em 'thank you,' as I do?"

Slowly rose the silent Betty, and laying her hand in my friend's she whispered, "You are so good to us lady, we cannot thank you enough."

Then they fell to eating, and right hungry they seemed to be, so Biddy was told to bring them some biscuits and butter, which she did, and they were also eaten with a keen relish.

All this time Aunt Liddy sat busy with her knitting, her thoughts, doubtless, wandering to her youthful days, for she nodded her head and muttered, "Yes, Miranny Jones married Joe Hodgkins, and they settled—I don't mind the name of the place. Well, well; poor dears! Their lives begun under a cloud, sure enough."

It was getting dark, and the children began to feel uneasy to get home. Deeply interested in the little ones, I offered to take them home and see the condition of things there before leaving them to the tender mercies of anybody. So, slipping on hat and shawl and giving a hand to each, we hastened through the park and down a quiet street till I was shown into a back room of a respectable-looking house. Here a scene met my gaze that never can be forgotten. A woman about thirty years of age lay sprawling at full length upon the floor, with her bonnet crushed, her shawl torn, and her features distorted. Can this be a home? thought I. The disorderly condition of the room; the table standing filled with unwashed dishes; the stove filthy; a lounge piled up with soiled clothes on top of which a cat lay asleep.

As we stood in the doorway considering what was best to do, we heard steps approaching, and some one whistling came in upon the scene.

"Hello! Hello here! What's up here! That you, Mirandy? Been at it again, old gal? Haven't I told you—" Then, perceiving a stranger, he began bowing and scraping, saying, "Take a seat, Miss. Sorry times these! That there woman (would you believe it?) goes at it regular. The children here can tell you what a hard time I have of it, comiug home tired from my work to supper, no fire, and she like that. 'Tis enough to drive a man mad, it is. As true as my name's Joe Hodgkins, I'll not stand it much longer!"

Stepping forward, I said, "Are you the husband of that woman, and the father of these children? And do you pretend to say that you never take a drop yourself? Have you not, by your example, taught that woman this dreadful habit?"

In my indignation, I said much more, and never an answer did the man offer in explanation. Thoroughly ashamed and crushed, he helped me lay the unconscious sleeper on the lounge, where I left them, with the promise of returning on the morrow to have a talk with the woman.

Hastening back through the darkness, I related to my friend the result of my visit, and then it was that Aunt Liddy told us an incident in the early life of Miranda Jones which teaches the truth of the scripture, "The fathers have eaten sour grapes, and the children's teeth are set on edge."

"Mirandy Jones," said Aunt Liddy, smoothing her apron, "was the oldest gal of Betsey Snell, as was. We were gals together, and she married a Jones, as I said afore, and set up house-keepin' at Newton Corners. Now Seth Jones (Mirandy's father) was a drinkin' man, and they allers had sperrets in the house, and many's the time I've seen, with sorrow, the children feed with the leavin's of sugar in the brandy glass. Not brandy, p'r'aps, but 'toddy' they called it in them days. But I'm ahead of my story. Where was I? Oh! When Mirandy wasn't more'n a month old, I used to visit there proper often, and time an' ag'in I've seen Betsey feedin' o' that babe gin and hot water, sweetened, to cure collicky pains. Says I to her, 'Why, Betsey, you'l surely give the child a taste for strong drink;' and then she'd laugh and say, 'Why, Liddy, everybody gives babies drops to start the wind; in course they do,' says she. But I thought not, and cried against it every time. 'Father drinks toddy, and gin-toddy is good for the baby,' she would say. So that was the beginning of poor Mirandy's fate.

"When the other children came along, they were fed the same way, and all turned out drunkards, as I knew they would. They was all boys, and 'twa'nt thought nothin' strange. But I never heard how Joe Hodgkins and his wife got along, but the minute I clap'd eyes on that woman I felt sure it was Betsey's child. Dearie me! How shocking! And will those pretty dears have the same inheritance, I wonder? Marion, come, let's have a light, and let's think of something else to try to forget what can't be helped."

Another instance of hereditary transmission, thought I. In whatever direction we turn, we find humanity subject to the same law. Not only the perverted tastes of parents are visited upon the children unto the third and fourth generation, but talent is likewise handed down — sometimes lost sight of in the first, but re-appearing in the next generation. We find families of doctors, where father, son and grandson are natural surgeons. We hear of artists whose immediate descendants show no remarkable talents; but among the children's children will be found traces of their grandfather's art. It is the same with music. Even in home matters the same law of inheritance prevails. The thorough housckeeper leaves a taste for such pursuits, though early habits combined with the talent produce the perfect manager.

Oh! ye mothers! Since three-fourths of our happiness in this life depends on the comforts derived from a well-appointed home, see to it that you leave such an inheritance as will cause future generations to bless your name for ever.

Poultry Yard.

HATCHING CHICKENS IN HOT WEATHER.

BY AGNES.

THERE is one very good reason why chickens should not be hatched during the warm months of summer: It produces a hot-bed for that terribly troublesome little insect, the flea, which becomes such a source of annoyance about some farm houses that sensitive people are glad to quit the premises.

If any one wishes to test the matter, let them sit hens in the mouth of August. Unless much time and care have previously been spent upon the hennery, before three weeks have passed, the nest will be covered with very small insects of a grayish color. If allowed to remain, in a day or two more these will have grown a little larger, become of a blood-red color, but retain the same shape as before. Visit the nest again in one or two days, and you will find these animals changed to the form of a flea, and of a brown or black color. Allow them to remain louger, and when you return you will find these back-biters in the condition of "Paddy's bug"—not there, but migrating in every direction to stock the farm and its buildings.

For this reason houses and yards should be prepared purposely for poultry. If fowls are allowed to roost on trees and in barns, the result will, in time, be serious.

A Newhampshire dealer in fancy fowls sings the praise of his favorite breed in the following unique hymn:

If you want some feathered st
That will not your wishes m
When at their nests you daily kn
Buy some eggs or get a fl
Of the famous Plymouth R

FINE POULTRY BUSINESS IN CALIFORNIA.

A gentleman writes us from the East inquiring whether the business of raising fine poultry in this State will pay, stating that he has a lot of fine pure-breds that he can bring out here with him if there is sufficient inducement. Now, when it comes to advice, we small neither advise one to come, nor to stay away. But we will make a few statements in regard to the business of poultry raising here, and leave it to the judgment of whom it may concern. First, it will pay to make a business of raising fine poultry, if the business is rightly conducted. The demand for fancy breeds at fancy prices is very limited, but there is a good general demand for good breeds at fair prices. The market for eggs for consumption is always good. Eggs are never lower here than 25 cents per dozen. Common hens are worth $6 to $8 per dozen. In a good locality where there is pure water and good range and plenty of shade, and the poultry are supplied with a variety of feed, and can get green feed all the year round, poultry are as healthy and as easily raised and cheaply kept as in any other country. Probably there is no country where they can be kept at a better profit, when produced for market, both poultry and eggs. We think that the business of fancy fowls exclusively could be carried on with greater success East than in California. But for one who designs to keep best breeds for profit, and to breed fine fowls, also eggs to be sold at reasonable prices to such as wish to improve their stock, we are certainly setisfied that there is no better place than California, and in California no better place than in the vicinity of San Jose.

Lands within ten miles of San Jose can be obtained from $60 to $600 per acre. One hundred dollars per acre will get as good land and locality as desirable.

The worst thing to contend with here in the poultry business is vermin, which breed in our climate wonderfully fast. And an important injunction is, in our dry season, to supply plenty of green feed, as poultry will not keep healthy without it.

While caring for the poultry, an orchard can be started and kept growing in the range as well as not. Indeed, there are no two branches of farming that pay better together than orcharding and poultry raising.

CAME FOWLS.

Mr. L. E. Matteson, of Stockton, whose card can be found in our Directory, writes as follows.

Mr. Editor: With the additions I have made to my breeding stock the past year, from the Eastern States and Europe, I have now the finest collection of Game fowls on any one breeder's yards on the Pacific Coast. My stock consists of the following varieties: English Black-breasted Reds, willow legs; English Black-breasted Reds, white legs, of the Sir Heathcoate strains; and Fish Blue Grey; all imported by myself. Also, the following American varieties: Tartars, Batlers, Eslins, Jack McClellans, and a fine strain of pit fowls. Should I receive any orders through your agency, I will guarantee satisfaction to first hands. All birds are warranted thoroughbred and true to name. References from former customers given if necessary.

Respectfully, L. E. Matteson.

Keep Chickens Scratching.—The following, from the *Journal of Horticulture*, is very sensible: "Shelter afforded by

doors and posts is almost useless. We want the shade of living undergroth, beneath which the chickens can creep and rest. Chickens, again, must be occupied. Those runs which are only a few yards square, and which are daintily swept over every day to make them look tidy for visitors, are useless for chickens. Nothing can grow or keep healthy in those smooth billiard-table-like runs. Chickens want to be occupied and must be kept busy. The runs must be dug up and piles of the loose dirt thrown up one day on another, and the chickens will delight in leveling these. A capital way to keep chickens on the scratch is to throw their whole corn always down among loose dirt or a lump of straw. The sexes, too, must be separated in good time. Some breeds are more precocious than others, and so we can fix no reliable date for their separation; it must depend on the breed and breeder's experience. There is, however, another point which we think quite as important—namely, moving every little while the pullets of the larger breeds, where size is a desideratum, from yard to yard, for we are convinced it retards maturity and laying at an early age, and so greater size is produced."

Cure of Gapes.—The Lancaster *Farmer* says: "In a recent conversation with an experienced chicken raiser, he informed us that he had been very successful in conquering the gapes in young fowls by the application of air slaked lime. As soon as a manifestation of the gapes appears, he confines his chickens in a box one at a time, and places a coarse piece of cotton or linen over the top. Upon this he places the pulverized lime, and taps the screen sufficiently to cause the lime to fall through. This lime dust the fowl inhales and it makes it sneeze, and in a short time the cause of the gapes is thrown out in the form of a slimy mass of worms, which had accumulated in the windpipe and smaller air vessels. This remedy he considers superior to any he has ever tried, and he seldom fails to effect a perfect cure. He has abjured all those mechanical means by which it is attempted to dislodge the worms with instruments made of whalebone, hog bristols or fine wire, alleging that people are quite as apt to push the creatures further down the throat of the fowls as to draw them up.

An Egg-Preserving Pickle Recipe.—Three quarts lime, tablespooeful cream tartar, one cupful salt, and water enough to fill a five gallon can; after seventeen dozen eggs have been carefully put within the can. To the water add the other ingredients, stir up well and pour it on the eggs and keep them in a cool place entirely covered by the pickle.

The lady subscriber who furnished the above keeps her eggs perfectly sweet with the above treatment, and by special request, after writing the above recipe, she boiled me an egg that had been in pickle four months, and I found it perfectly sweet and free from all shadow of taint or any objection of any kind, and would trust them fully as soon as the freshest eggs in any of our markets. She usually gets the highest price of fresh eggs, and does not sell till they are about fifty cents a dozen.

Feeding Fowls pepper. I witnessed for the first time, at the late Crystal Palace bird show, the results of pepper feeding, and was greatly pleased, as well as surprised, at the wonderful improvement in color of the numerous specimens so treated. I look upon the treatment as fair and legitimate, and in no way deserving the name "trick," which, I am sorry to say, has been applied to it; such a term of reproach should be reserved for all dishonest interference with the outside of competing birds, such as drawing, trimming, or staining feathers. Whatever can be effected through the medium of the secreting organs of any bird cannot fairly be termed artificial or unnatural, unless everything be so named which differs from the mode of life and food of the bird in its original state.

The object aimed at in the treatment of all domestic animals is an improvement upon their natural or wild state; and in the case of the canary bird bred in confinement, cayenne pepper, voluntarily eaten, is no more unnatural to it than the egg and cake with which show birds have been regularly fed for years. The system of maulting birds in close, warm cages, feeding them at the same time on more stimulating food than simple seed, has long been recognized as a necessity, where depth and richness of color are desired.

The new mode of feeding on cayenne pepper is simply an extension of this rule, and whether discovered accidently or as the result of an experiment, is, in my humble opinion, the great improvement in the treatment of our favorites that I have witnessed. If it could be shown that the health of the birds was injured by such food, there would be some ground for objection on the score of cruelty; but, as from all I can learn, such is not the case, but rather the contrary. I, for one, hail the discovery with great satisfaction. Depth of color has been the point chiefly aimed at in many varieties of canary, and here it is beyond the expectation of the oldest fanciers, and permanent or not, according to the continued treatment of the bird. I would, in conclusion, lay down one simple rule for all, viz: Put whatever you like inside the bird, that it willingly takes without injury; but forbid, under the strictest penalties any interference with the outside.—*Cor. Poultry Review* (*England*).

Poultry Profits.—Every year poultry keeping grows more profitable. We do not refer now to the rage for fancy fowls, but are speaking of the profit in raising fowls and eggs for the city market.

As the progress of civilization creates great cities, and sets apart extensive classes of dwellers indoors with appetites for articles of food less hearty and gross than the pork and beans, and cornbeef, and rye and Indian bread of our ancestors, the demand for the products of the poultry yard increase.

Farmers who have been heretofore in the habit of making poultry-keeping as "small potatoes," are waking up to the fact that there is sometimes greater profit in it than in more pretentious operations of the farm.

The valuable importations of fowls made in late years are encouraging to the pursuet, and the study given to improve management augments the profits.

Eggs by Weight.—We have advocated the plan of selling eggs by the pound for years, and now we see an opening to bring the thing about. We think it as unfair to sell eggs by count as it is to have short weight in raisins: On testing the difference we find about this result: Small eggs will weigh say one pound per dozen, medium one three-fourth pounds, while large will weigh two one-fourth pounds. We think that one three-fourth pounds is about a fair average. We buy about fifteen hundred dozen per month from producers, and we find all the above difference in the weight. Parties claim that the hens that lay the small eggs will lay the greatest number. Now just see what a premium we are paying for the production of an inferior article. We still notice, and this by experiment, too, that the shells of two pounds of meat from the small eggs weigh nearly double that of the large eggs. We will try to explain our idea: For instance one woman brings us four dozen eggs that weigh four pounds; we pay her eighty cents for them; she says nothing; it is her due, twenty cents per dozen for her eggs; another comes, has two dozen eggs, we pay her forty cents, weigh her eggs, and find she has four pounds, and she does not complain—twenty cents per dozen for eggs. Now, we say justice demands that we pay at least as much for the two dozen that weigh four pounds as we do for the four dozen that weigh four pounds, while the shells of the four dozen weigh much more than the shells of the two dozen. Difference in these figures are intended for extremes, yet it is of every-day occurrence that we find them both. Our opinion is that the price should be based on the rate of ten pounds to the 100 eggs.—*Cor. American Grocer.*

Poultry Dough.—We disagree with those who recommend a thin batter of oat, or corn-meal for fattening fowls. Beer moisten the meal just enough to keep it together and then give the drink by itself. It is well known that dyspepsia may be induced in the human subject by an exclusive diet of thin soups. The philosophy of the matter is, that the gastric secretions are so diluted, that they are not strong enough to properly dissolve the nutritious portions of the food. This reasoning will apply, at least with partial force, to poultry. Their digestive powers are very strong, but this is no reason why they should be employed at a disadvantage.—*Poultry Journal.*

The Dairy.

A Good Cow.

Long in the face, she's fine in the horn,
Quickly gets fat without cake or corn;
Clean in the jaws and full in the chine,
Heavy in flank and wide in loin.

Broad in the ribs and long in the rump,
Straight and flat-backed, without e'en a bump;
Wide in the hips and calm in the eyes,
Fine in the shoulders and thin in the thighs,

Light in the neck and small in the tail,
Wide in the breast and will fill the milk-pail;
Fine of the bone and silky of skin,
Airy without, a meat market within.

DAIRYING IN CALIFORNIA.

Among the Dairies at Point Reyes.

It is of the butter dairies at Point Reyes that I intend to write, and as 750,000 pounds of butter are every year shipped to market from there, it is surely a point worthy of notice. An hour's ride by steamer from San Francisco to San Quentin, and thence two hours in the narrow gauge cars of the North Pacific Coast R. R. brings one to Olema. Here I met Mr. Wm. Evans, the gentlemanly superintendent in charge of the enormous ranches belonging to Charles Webb Howard, Esq., and the estate of Judge Shafter. These ranches aggregate nearly 70,000 acres, and there are at present nearly 3,000 cows upon them. I rode with Mr. Evans two full days, spending the time in visiting the dairies on one part of Mr. Howard's place. Of these there are nine, with from 150 to 250 cows on each. Butter is made exclusively at all these dairies, excepting one, where butter and skimmed cheese are made. Better-conducted butter dairies than some of them it would be difficult to find in California, or anywhere else. The land is rolling and hilly, rising to mountains in places. The herbage seems well adapted to produce good milk, while the ocean breezes that blow almost every day give a temperature admirable adapted for butter making. Gradually the land is being seeded to the best grasses adapted to that locality, and I was shown several enormous iron cases filled with Australian rye grass seed, imported by Mr. Howard. Mr. Evans has been watching the experiment of introducing this grass for two or three years, and is very enthusiastic in its praise.

The general arrangement of the dairy houses and the apparatus used in the same in all but one of the dairies, and the form of molding the butter into two-pound rolls, is alike in all. The butter-worked used is the best one I have ever seen. It consists of a circular board, about four feet in diameter, raised about two feet from the floor, and having a deep groove cut near its edge, with an outlet at a point on the board slightly lower than any other point. About four inches above is another circular board, some six inches less in diameter than the lower one. This upper board revolves, and upon it the butter is worked, the butter-milk and brine dropping to the lower board, and thence away. The lever of paddle used is flat and not heavy. Milk is set in pans; the various milk rooms having a capacity of 900 to 1,300 pans. In skimming, the edge of the cream is loosened with a blade of horn or wood, the pan tilted a little and the cream poured off. In most dairies the cream is kept one day before churning, and is worked, salted and molded the same day it is churned; the bleached cotton wrapping for each roll of butter being put on one day later. No coloring is used, though it would at times be an advantage to use a little, in my judgment. When market prices are satisfactory, the butter is shipped twice a week by rail or by schooner, being packed in flat boxes holding about sixty rolls. The Point Reyes dairymen are now packing their butter to hold until autumn. The rolls are placed perpendicularly in barrels, and a clear brine poured in until the cask is full.

I question the wisdom of all the dairymen in California running in one rut as to style and form of putting up their butter, simply because their commission men tell them that the market will take nothing but two-pound rolls. I hear of no gilt-edge dairies—of none who are able to command a fancy price—and until some of them get out of this rut of universal uniformity of form and package, I shall not expect to hear of any. Most of the butter which I saw at Point Reyes was very good indeed; some of it was of superb quality, having solidity, perfection of grain, and a fragrance and aroma that left nothing to be desired.

Among the very choicest dairies was that of Mr. T. B. Crandell, who milks 250 cows, and gives his own personal attention to the management of the affairs of his ranch. He has been a long time resident on Point Reyes, and is one of the most intelligent agriculturists whom I have met in this State. Mr. Henry Claussen, a Swedish gentleman, rents two of Mr. Howard's ranches and dairies, keeping on one 200 cows, and on the other about 180. At one of these dairies Mr. C. has taken a "new departure," for the Pacific Coast. He discards the use of pans, and although he has a very inadequate supply of water, yet he puts the milk into large and deep cans, which are placed at once in the tank of water.

These cans are 20 inches in diameter by 22 inches deep, the bottom being raised about three inches above the lower edge of the sides, with several large holes through this lower projecting edge, to admit of the passage of air or water underneath.

As in all the other dairies where the common pans are used, Mr. C. skims these pans after 36 hours, and he is convinced that he gets fully as much butter as he does at the other dairy which he controls. I regret that he has not made some exact and careful experiments by way of arriving at more exact data. As soon as skimmed, this milk, now 36 hours' old, is at once put into the cheese vat, and the temperature raised to 82° or 84°, when the coloring, rennet and the buttermilk, are added, and the milk covered for forty minutes. The curd is then cut pretty fine, but no farther heat is added. While the curd is still in a soft state, the vat is tilted and the whey slowly drawn off. As the curd hardens a little, it is dipped out, salted at the rate of two pounds per hundred pounds of cheese, ground and put to press. For such cheese, (and one that I tasted, which was three weeks old, was really a good skimmed cheese,) when only ten days old, Mr. Claussen readily gets nine cents per pound in San Francisco.

When Mr. Claussen ventured to try this system of dairying, he was laught at by many of his Point Reyes neighbors, but with such results following the effort it is my opinion that he can stand it. The cheeses are 14 inches in diameter, flat, and weigh about 25 pounds each. In February last Mr. Claussen made the following test: From milk by deep-setting, with water at 55° Fah., 26 pounds of such milk gave one pound of butter and one and eight-tenths pounds of skim cheese.

The same day and date, 25½ pounds of milk, shallow-setting, gave one pound of butter. The milk was sour at skimming and fit only for hogs.

Of course, as the season advances and the grasses mature, the yield of butter to the given quantity of milk will be greater, and there will also be a greater amount of cheese.

On his ranch of 200 cows, where butter alone is made, Mr. C. made and sold last year 33,000 pounds of butter. After making a fair allowance for poor and dry cows, and the milk, cream and butter consumed by a family of fifteen persons or more, we have an average of at least 175 pounds of butter per year for each cow. From his other ranch, of less than 200 cows, Mr. C. last year sold 31,000 pounds of butter, and 45,000 pounds of cheese, while the sales of pork from both places amounted to $2,300, which sum he expects to exceed considerably this year.

Mr. Crandell last year marketed 42,000 pounds of butter from 250 cows, and was making 200 pounds daily when I was there, from 217 cows, all told.

Mr. Evans marketed, in 1875, 31,000 pounds of butter from 161 cows.

In some tests recently made, 22 pounds of milk produced a pound of butter. The cows are mostly Shorthorn crossed with Ayrshire, with some Devons. In some of the dairies selected cows in flush of feed have yielded daily 54 pounds of milk.

On the whole, this is doubtless one of the finest and best systematized of the large ranches or farms in our country. Mr. Howard owns the land and buildings, with their fixtures and the cows, receiving a yearly ren of $27 50 per cow for the use of the ranches.—*Gardner B. Weeks, in Country Gentleman.*

Relative Cost of Butter and Beef. Did it ever occur to any of your readers that it takes more feed to make a pound of beef than a pound of butter? A good cow, well cared for, will make 200 pounds of butter in a season, worth from $60 to $70; but a dry cow with the same feed will not gain as much in weight in the same time, nor will she be worth as much as the butter from the dairy cow, and the milch cow is left. An acquaintance of mine is fattening an ox, and in sixty days he had fed him 600 pounds of meal, at a cost of $15, with only 100 pounds gain in weight.—*Ex.*

Pure Water for Cattle.—Mr. X. A. Willard, in a late paper before the Connecticut Farmers' Convention, spoke as follows: Many cases of fever have been traced to the milk drawn from cows by the attendants of sick persons; also the impure water with which milk pans were washed. Cows that drink impure water give unwholesome milk.

Educational.

A Country School.

Pretty and pale and tired
  She sits in her stiff-back chair,
While the blazing summer sun
  Shines in on her soft brown hair;
And the tiny brook without,
  That she heard through the open door,
Mocks with its murmur cool
  Hard bench and dusty floor.

It seems such an endless round—
  Grammar and A, B, C;
The blackboard and the sums;
  The stupid geography;
When from teacher to little Jem
  Not one of them cares a straw,
Whether "John" is in any "case,"
  Or Kansas in Omaha.

But Jemmy's bare brown feet
  Are aching to wade in the stream,
Where the trout to his luring bait
  Shall leap with a quick, bright gleam:
And his teacher's blue eyes stray
  To the flowers on the desk hard by,
Till her thoughts are following her eyes
  With a half-unconscious sigh.

Her heart outruns the clock
  As she smells their faint sweet scent:
But when have time and heart
  Their measure in unison blent?
For time will haste or lag,
  Like your shadow on the grass,
That lingers far behind,
  Or flies when you fain would pass.

Have patience, restless Jem,
  The stream and the fish will wait:
And patience, tired blue eyes—
  Down the winding road by the gate,
Under the willow shade,
  Stands some one with fresher flowers:
So turn to your books again,
  And keep love for the after hours.

THE SUBJECT OF EDUCATION.

THE subject of education is a pretty broad one. Webster says "Education is properly *to draw forth*, and implies not so much the communication of knowledge as the discipline of the intellect, the establishment of principles, and the regulation of the heart." The acquiring of *knowledge* with the requisite *skill* to make the best use of it, would be our definition of education. The one is quite as essential as the other, and either alone is incomplete, while both together make a real education of practical utility.

A practical education must train as well as develop the powers. The mind must be enlightened, and the hands be able to do its bidding. It is more essential, in dealing with the materials of earth with which we are brought into contact, and from which everything that supports life and makes it endurable is obtained with labor—it is more essential that the ability to labor dexterously is acquired than that we gain theoretical instruction without the power to use what we know. He is educated the best who can, other things being equal, accomplish the most with a given amount of strength, in a given amount of time, in whatever direction he devotes his energies. This is as true from an intellectual and moral as from a material standpoint.

As our civilization advances, science and inventions increase, and as moral refinement progress the utility of things will be more and more regarded, and the necessity for being practical will become more and more apparent.

Practicality neither smothers nor blunts the finer sentiments and feelings. It is the true foundation, without which a proper realization of noblest enjoyments is impossible. And when it comes to gaining a living in competition with the greed of the world as it is in this, its infancy of civilization, to be well informed and capable is certainly quite essential to one not made independent by the material aequirement of others.

In contrast with an education for usefulness—the education of body and mind and heart to such labor as will bring competence while doing good—is another species now quite popular. It is the idea of an education that will get a living without working for it, or making fair returns in usefulness to the community for what is gained from it. This is what some call "being smart," which means living off what othera produce. Our common school teachers are, too often, imbued with the idea, and instill it into the heads of their pupils, that to get an education so as to live without work is *smart*. While nearly every institute of a private character impresses the pupils with the importance of education as a means of acquiring wealth without labor.

Our large cities are filled with young men of this class, who think it not honorable to do manual labor, and who are incompetent, even if they desired to work with their hands. They are waiting for some position as clerk in store or office. And when it comes to offices, what kind of men do we find there? and what are they doing? Nine-tenths of them are engaged in some schemes or speculations which could be dispensed with with benefit to the community. Their inventive talents are used to contrive new ways for acquiring the productions of others; any way to get money. Without adding any real value to anything, they manage to manipulate business between man and man, and pass it through their hands, taking liberal toll for their "service." Their coostant study is now to take advantage of others' necessities, and to absorb their substance. Look at insurance agents, real estate agents, stock brokers of every class, sewing machine agents, lawyers who make laws to feather their own nests from others' chickens, and, in fact, the whole class of manipulators of so-called "business" wherein men who labor have to hold intercourse with each other. On this Coast, the mining business has given a great opportunity for getting money out of the people. The *share* business takes more money on the outside than the mines pay on the inside, the most of which goes to enrich a set of sharpers who are educated to get a living without working for it.

Horace Greeley once said that he who gets money without squarely earning it steals it. How many thieves are being prepared in all of our schools at this rate?

The remedy for this condition of things lies largely in the direction of industrial schools—schools where a technical education can be acquired—where pupils are educated for usefulness, instead of uselessness—where the use of tools and *how to do honest work* and excel in the accomplishment of skillful labor is made a specialty. And *at home* parents should aim to instill into the minds of their children, upon the platform of honesty and moral and religious principle, the ennobling idea that labor is honorable; that to be useful to the world is of more importance than being rich, and that honorable riches can be gained through superior understanding of how to take advantage of material resources in an honest manner, while pursuing an honorable avocation and living a happy and useful life.

Children on the Farm.—Children on the farm are better off than children in towns and cities. It is almost impossible to raise good children in town. They will fall in with bad associates and become more or less contaminated. They never make the distinguished men that country boys do. There are too many attractions and pleasures to become fascinated with, and they think of these instead of good books and of growth in knowledge and virtue. We grew up on a farm and are glad that that was our fate. We had to work hard, and thought our lot was a hard one, but now know it was the best thing that could have befallen us—better than an inheritance of riches. The only pleasures within reach, good books afforded; and we read and reread every book in our district school library, and the knowledge gained has clung to us ever since. Then, farm life has good influences on children. We recollect vividly the pleasures afforded in our youthful days, by the announcement of a colt, or a calf, or a lamb, or of a brood of pigs. Farmers' children can appreciate the pleasures such announcement make in one's younger days. And the the influence of petting and kindly treating all kinds of stock, is a good influence. But this is not confined to kindly treating stock alone. It extends to the care of trees—planting and nursing them kindly—and flowers, and garden vegetables, and everything of the kind. We have noticed, too, that when farmers' boys go off to school, to the academy, or college, they are more laborious, and thorough, and practical than town boys; but when they enter into business pursuits, the difference is still more observable.

Root Up the Weeds.—Two boys, Jim and Will, were employed by a gentleman to keep the paths of his garden weeded. Jim contented himself with taking off the tops of the weeds. He soon cried out, "I've cleared my path," and having swept away the leaves he went off to play.

Will was much longer at work, for he stopped to take up all the weeds by the roots, and he was well tired when he went home.

But the rain came down in the night and all the next day, and when the boys' father went, a few days after, to look at the two paths, Jim's wanted weeding as much as at first, while Will's was clear and only needed a few turns of the roller to make it quite neat. So Jim was sent back to do his work properly; and very tired he would have been had not Will good-naturedly helped him to finish his task.

Only thorough work is worth doing. Faults only half uprooted will appear again and again, and we shall almost despair of curing them. Will you remember this?—*Bright Side.*

AGRICULTURAL READING.—We ought to encourage practical agricultural reading. It is not claimed that these helps can, of themselves, make skillful agriculturists, but to a working man, readey to learn, they are suggestive. To an enquiring mind, at an impressive moment, they may do great good. I do not remember ever to have seen the subject put in a stronger light than in the following conversation, read in an agricultural paper some time ago:

A practical, hard-working, thriving farmer, relating his experience and trials, entered into the minute details of his careful and original experiments—his unwearied patience, and sometimes growing eloquent over his final brilliant victories. His knowledge could not be written by men who know nothing about farming. Said a quiet friend, "Well, neighbor, if all this valuable information, the result of years of observation and labor, were written out in full and published, which would you have a young man, in whom you felt sincere interest, do—take this as he finds it from your pen, or go through the same vexation, labor and losses that you had to get it?" The question puzzled him, and after a moment's silence, he yielded gracefully that real practical writing could do great good.—*Ex.*

WHAT SMOKING DOES FOR THE BOYS. A certain doctor, struck with the large number of boys under fifteen years of age whom he observed smoking, was led to inquire into the effect the habit had upon the general health. He took for his purpose thirty-eight boys, aged from nine to fifteen, and carefully examined them. In twenty-seven of them he discovered injurious traces of the habit. In twenty-two there were various disorders of the circulation and digestion, palpitation of the heart, and a more or less marked taste for strong drink. In twelve there was frequent bleeding of the nose, ten had disturbed sleep, twelve had slight ulceration of the mucus membrane of the mouth, which disappeared on ceasing from the use of tobacco for some days. The doctor treated them all for weakness, but with little effect until the smoking was discontinued, when health and strength were soon restored. These facts are given on the authority of the *British Medical Journal.*

FOR FARMERS, the country wants the most energetic, thorough-going and wide-awake boys and young men that can be found. Hence, if a boy is blessed with that crowning concomitant which moves the world—brains—let him become a farmer. Brains constitute the great desideratum in agricultural science at the present day. Fifty years ago muscle was the essential requisite. Fifty years ago a farmer was expected to perform every manual labor of the farm by the exercise of muscular force, while at the present day he needs more than muscle to enable him to manage labor-saving tools with skill and efficiency. When the labors of the farm were nearly all performed by the laborious and fatiguing application of human force, farming was irksome drudgery. But now, when teams and steam power respond to the bidding of the tiller of the soil, agriculture is the most agreeable livelihood that one can desire.

THE BASIS OF OUR CIVILIZATION is labor fairly rewarded. By this I mean that the great body of our people are compelled to toil with their hands, and rates of wages prevail under which they can rear families. The day laborer as well as the skilled artisan can generally send his children to the common school a few years, and the elements of education there received cultivate self-respect in parents and children. These schools are the nurseries in which citizens are grown. The immigrants from European countries generally avail themselves of their privileges. The native-born children of our adopted citizens are genuine Americans. Shall we encourage the immigration, nay, the importation of Chinese, who rear no families, have not half the wants of others, and can therefore work for half the prevailing wages? Every Chinaman who comes displaces one of our own laborers. Is it a good exchange? If the sole object of civilization were to enable the wealthy to accumulate more wealth, regardless of the comfort and cultivation of the common people, I should still doubt that wealth itself could afford to destroy the character of the nation in its greed for increase. If capital could avail itself of Chinese labor exclusively at half price, the impoverishment and final extinction of the great middle class of our country would leave a nation of lords and serfs, in which property itself would be a sort of adversity.

> *—Extract from Senator Sargent's Chinese Speech.*

GOOD ADVICE.—Think for yourself and think much more than you talk.

Be proud of your calling; if a shoemaker, strive to make a better shoe than anybody.

Look well to the ways of your footsteps; never let one be inside a bar-room or gaming saloon.

With a clear eye and an upright heart resist every wrong.

"If thou hast a truth to utter, speak and leave the rest to God."

Touch not, tastenot that which will corrupt.

Go not to your grave one-third whiskey, one-third tobacco, and the other third a composition of corruption so filthy that grave worms will shun the place where you sleep.

Be something—be somebody. Set your mark high in the world and then move towards it.

Don't wait for somebody to lift you up to the place you aspire—lift yourself.

"Act; act in the living present, heart within and God o'erhead.

HOW TO MAKE A NICE GIRL.—First get your girl. (N. B.—She mustn't be an old girl, but a young one, nice and tender,) Bring her up from early infancy on a strict diet of hot pickles, cold brandy-and-water, and Ouida's novels. Send her to a fashionable boarding school "to be "finished off;" and, when she comes home for the holidays, carefully develop her latent love for dress, extravagant habits and fondness for flirtations. Buy her the Slang Dictionary, and let her go anywhere and do everything she likes. By the time she is twenty-one she will be quite a nice girl.—*Punch.*

BOYS, NOTE THIS.—Don't forget to take off your hat when you enter the house. Gentlemen never keep their hats on in the presence of ladies, and if you always take yours off when mamma and the girls are by, you will not forget yourself or be mortified when a guest or a stranger happen to be in the parlor. Habit is stronger than anything else, and you will always find that the easiest way to make sure of doing right on all occasions is to get into the habit of doing right. Good manners cannot be put on at a moment's warning.

VULGARITY.—We have a friend that never speaks a "vulgar word." He is a minister and a writer of ability. "I resolved when I was a child," said he, "never to use a word which I could not pronounce before my mother without offending her." He kept his promise. He is a pure-minded, noble, honored man to-day. His rule and example are worthy of immitation.

Boys readily learn a class of low, vulgar words and expressions which are never heard in respectable circles. The utmost care on the part of parents will scarcely prevent it. Of course, we cannot think of girls as being so much exposed to this peril. We cannot imagine a decent girl using words which she would not give utterance to before her father and mother.

Such vulgarity is thought by some boys to be "smart," "the next thing to swearing," and yet not so wicked. It becomes a habit; it leads to profanity; it fills the mind with evil thoughts; it vulgarizes and degrades the soul; it prepares the way for many of the gross and fearful sins which now corrupt society.

Dear young reader, set a watch upon the door of your lips; keep your mouth free from all impurity.

Women.

Scientific Courtship.

Young Molly met Christopher down by the farm
With his analysis
And his catalysis
And his dialysis
What would he do there?
He came down to woo there,
He came down to sue there,
To bill and to coo there,
Not to fill her soul with alarm.

Oh! Science, 'tis thus that fair made you win.
With parthenogenesis
And alterogenesis
And heterogensis
And other such things;
For Love he has wings
And with him he brings
Full many such things
In the ears of fair maidens to din.

Young Christopher came with his finest brochures
On trilobates
And troglodytes
And such delights,
And he said, My dear, these are yours,
Yes, they're yours,
Love may come and love may go,
Science endures.

The heart is a stubborn thing,
Anc conical in shape;
A remnant which with us we bring
From our ancestral ape.
It drives the blood to Molly's cheeks,
She opens her ruby lips and speaks;
Her mitral valve plays
In the wildest of ways,
Her columns arena
Gives her an idea
By the way that it acts;
And accepting the facts,
She then and there agrees to become
The partner of his scientific home.
—(Journal of Applied Chemistry.

"As Sixteen to Twenty-six."

I THANK you, Dr. Draper, for furnishing me a text. Dr. John Wm. Draper says, "The strength of the female is to that of the male as 16 to 26."

About three-fifths, then, is the fraction. Who would guess it?

Last summer I wandered out to a Ligonier farm-house for a brief visit. Remaining over night, I was aroused in the morning at a dreadful hour—four o'clock, I think—by the busy rattle, clatter and hum of a new day dawning in the kitchen.

I thought unutterable things, and went to sleep. At seven I was awakened "for all day" by the rising bell. In due time I found myself sitting at table. In a few minutes in sauntered the nominal head of the house, a great, stalwart man, the picture of health. "Wife, have you any breakfast for me?" he asked in a good-natured way, so *very* good-natured that I instantly surmised that he had already been well fed, and only came now for a cup of coffee and a chat.

"Oh, yes, dear," the little wife said; and she hurried to set a chair for him, and to put cup, plate, etc., on the table.

"Why, how's this?" I asked; "I had thought the family day commenced a little after midnight!"

"Yes," said the wife, "he has had one breakfast; he can't work before breakfast."

"No, I can't work before breakfast no. how! Have to have my breakfast before I can do anything," the husband asserted, with great apparent self-respect for that very circumstance.

I said, with a somewhat nettled feeling, which, of course, I could not exhibit, "And can *you* work before breakfast, Mrs. Clark?"

"Oh, my! I have to be up and over the stove, cooking meat and potatoes by four, every morning."

The little woman had a great "stirrin" baby—as they call them out here—and to my certain knowledge he had sung several "Songs in the Night" just past; I knew the mother's sleep had been fragmentary, at best; I know she was never thoroughly rested from one day to another; but she could, all the Summer long, get up before the light and "work before breakfast" to prepare a hearty meal for that weaker vessel who "couldn't work before breakfast." Neither husband nor wife seemed to think the eternal fitness of things was disturbed in the least by this little arrangement.

Item. Since then I have been trying to mature a plan by which everybody can have rolls and coffee before rising. Can't make it out except by an alcohol boiler, and probably nine out of ten will blow themselves up with that, to say nothing of setting the bed-clothes on fire.

Sudden second thought—marvelous it didn't occur before!—servant, or wife, whichever you happen to have, can get along somehow without the coffee, and take her "roll" out of bed—to get yours ready! (Patent.)

Because, "the strength of the woman," etc.

But there be men and men.

Once I went to visit a former schoolmate who had been many years married to a good man, who owed his superior wit, moral worth, right ideas to his mother. He was an Aunherst graduate, a cultured gentleman, a Congregational minister, the preceptor of an acadamy, and, last and least, but not little, an exceedingly handsome man. Just think of it, he was not spoiled a particle! They lived in their own commodious house, this childless couple, keeping a servant, when a good one was to be had; going without at other times.

It happened to be there at one of the other times—and was glad of it—for it developed this astounding fact that George really believed he was stronger than Lizzie; practically believed it to the extent of getting up and making the fire, and assisting about breakfast with all the vigor and energy expected from a hired girl at a dollar and fifty cents a week!

It was pleasant to see and to remember how this lively, cheerful, efficient and versatile professor "snapped around," setting the table, going down cellar for bread, running out with white pitcher to the milkman's cart, and after meals—*that's* the tug of war—actually drying the dishes, in a handy "26" manner, to the

tune of "16's" washing. And other things to match.

At nine o'clock George was off to his school; at eleven Mrs. George went down and conducted several English recitations, and could have dropped into Latin without a struggle or a groan.

"Well, what of it?" mutters some disaffected interrogation point.

Oh, nothing. Only I thought I'd tell you; for "woman's strength is to man's as 16 to 26;" and a good man in a house is a well-spring of pleasure.

I used to know another man, a shoemaker. He was six feet high, broad-shouldered, and apparently robust.

But he had an "inward weakness," located mostly in his will; it was one of the queerest ills that flesh is heir to. It would sometimes seize him as he sat working at a child's shoe, and so feeble did he become that he just had strength to grasp his rifle in a convulsive sort of way, rush from the shop, tramp over the mountain till sundown, and then toil home with two grey squirrels and a robin red-breast—for man's strength is as 26, you know.

His wife, meanwhile, did all her own housework, reared two great strapping boys, took in sewing, stitched boots, and amused herself in the intervals of these light, graceful employments by quietly enduring a tyrant rheumatism which, for weeks at a time, obliged her to go around her house "on all fours," to attend to her duties; and woman's strength is but 16! Eh, Dr. Draper?

A word, in closing, to John William Draper, M.D., LL.D. In his "Text Book on Physiology for the Use of Schools and Colleges," p. 363, he enumerates several mental and moral differences between the sexes, and then says, "The physiologist is thus obliged to speak of the constitutional and mental imperfections of the female," etc.

Who "obliged" him? What's the use of being an "M.D., LL.D." if a man may not do as he likes? And why did not this nebulous, or fabulous, compelling influence "oblige" him to speak of certain "constitutional" and *moral* "imperfections" of the male? If woman's "less vigorous reasoning powers" are an imperfection, what shall we call man's proverbially feeble endurance of extreme pain? If woman's unbalanced judgment is an imperfection, what about man's inferior delicacy and chastity of thought and feeling? Where was the justice of thus branding the sex with "imperfection?"

Was it a necessary thing, or a good thing in any event, to record such words upon the closing pages of a text book "for the use of schools and colleges?"—*J. A. W., in Science of Health.*

Things I Like To See.—A working man reading the newspaper; a real lady who can carry a parcel; a father at a place of amusement with his children; a young man with a clear eye, and a fresh, virtuous, unhackneyed face; a shop-girl neatly dressed, and without sham ornaments; a man of business going home at night with a bouquet for his wife; a shopkeeper civil to and patient with a poor woman, who, with a baby across her arm, ventures to buy a one shilling article; a dressmaker who is scientific enough to perfect a "fit," and yet leave your breathing apparatus in Christian-working condition; a shop that is not an emporium; a a milliner who don't come from Paris; a jolly domestic who likes "the family;" a bride with her pet small house; a young father with his first boy.—*Fanny Fern.*

A good wife is a good thing, but a bad husband beats her.

Domestic.

FAMILIAR TALKS---No. 12.

BY SNIP.

A YEAR ago I sent my first letter to the Agriculturist, and having been encouraged by seeing every article, good, bad or indifferent, in the paper, feel like trying to induce others to write occasionally. There is not a housekeeper but could write something. A receipt, a suggestion for the house, the dairy or the garden, an experiment tried—it may be just what some one is looking for. Come, my dear sister housekeepers, write and make *our* paper the most welcome visitor —one that cannot come too often.

PICKLED MEAT.

Here is a receipt for making a palatable dish of cold meat. After taking all the meat that can be nicely sliced from a boiled ham, chop the remainder fine as possible, season with pepper and cloves, put in a jar or bowl and cover an inch deep with vinegar. I use other meat in this way, but found the proportion of vinegar was too much to suit my taste. Let it stand a day or two.

APPLES AND CREAM.

Here is another which I am sure is good, though I have not tried it. Take good cooking apples, cut in halves, and bake till well done. (Remove the cores before baking.) Then put them in a deep dish, large enough to allow them to lie only one deep. Sprinkle sugar over them, pour on thick cream till it comes up on the sides of the apples, and eat when about half cold. The old rule was to bake only sweet apples, but I discarded that plan several years ago, and use those that are good for sauce. One member of our family wants the core cut out, the cavity filled with butter and sugar, and then bake the apples. He says they are excellent but my opinion is just the opposite.

HANDY PIECE BAG.

Here is something for the fancy-work corner that "Busy Bee" spoke of a month or two ago. Hardly that either, for it is useful rather than ornamental. Take a piece of cloth about three-fourths of a yard long, and about half a yard wide. Another piece as long but only half as wide. Hem one edge of each the longest way. Then lay the narrow piece on the wide one, keeping the right sides toward you. Baste the raw edges together, and sew the narrow piece to the other in three places so there will be four equal divisions when the ends are sewed together. When this is done, gather the two edges that are basted together. and sew on to a circular piece of cloth. Run a tape through the hem of the wide piece and you will have what was originally intended for a shoe and stocking bag. I use mine for patches, braids, worsteds and such stuff, and keep patterns in the central part.

Perhaps a hint in regard to these patterns will not be amiss. I write the name on a strip of white muslin, roll the pattern up snugly, and tie the strip around it so that the name can be seen at a glance.

BEST FOOD.

A correspondent asks this question of the "Editor of the Health Department:"

"Please give us your idea of the proper food necessary to obtain the highest mental achievements. The friend for whom I ask has recently lost, in a dearly loved husband, the only friend on earth who can thoroughly understand and appreciate her. She desires to fulfill her mission upon earth, and to live healthfully; has no little ones to absorb her time and thoughts, and resolves to devote her life henceforth to humanity. The whole world is her family, and for its welfare she is willing to make personal sacrifices."

As there is but one editor to this paper at present, we suppose it must mean *us*. Now, we do not claim to know quite everything, and have no particular hobby to ventilate on this subject. In feeding animals we should very largely consult the appetite of the beast, believing that in a healthy condition it would be an infallible guide. Even in disease, we believe the appetite often craves that food which is best. With everything good before it, the animal will eat that which its physical needs require. The same may be said of plants. Placed in a rich soil, the plant will absorb the elements necessary to its growth, and the better it is fed the better it will grow and develop.

This is getting right down to the root of the matter. There is within every being, whether plant, animal, or the higher man, an instinct superior to any amount of reason, which, if not abused, will never lead us far out of the way in matters of diet. Our civilization has invented a thousand devices and compounds for depraving the appetites of men and animals, especially of men. And to know *what to avoid* requires a good deal of practical experience, observation, scientific knowledge and reason. On general principles, that food which the appetite desires, which is easily digested and assimilated, is that which the system needs, and is the best, whether it be meat, fish, fowl, vegetables, grains, or fruits, so that it is simply prepared without stimulating condiments. Each person should keep his or her stomach in such condition that it is a superior law unto itself. By never deceiving or abusing it, it will never deceive or abuse the body or the mind, but will call for that which is good and wholesome, and do its work faithfully and cheerfully. Be true to your stomach, and it will be true to you. Keep it well, and it will keep you well, and allow you to develop; in fact, will promote and sustain development.

QUESTION AND RECIPES.

BY MRS. L. W.

Lady friends of the Agriculturist, I am going to ask a question. Some may think it a simple one, but it don't seem so to me. Will some one tell me how to bake jelly cake to keep it from sticking to the tins? I think every jelly cake I make will be the last one, for I cannot get them off, only in pieces. In return I will give "Snip" a recipe for making pickles, and tell "Enquirer" how to make mushroom catsup.

CUCUMBER PICKLES.

Pick your cucumbers when from three to four inches long; wipe them with a coarse towel (don't wet them); after wiping put them into weak salt water for twelve hours: take them out and drain until perfectly dry, then press them into glass fruit jars. To each quart of vinegar add one pound of brown sugar with mustard seed, grain pepper, cinnamon and cloves to suit the taste; boil and skim well, then pour it over the pickles boiling hot, being very careful to leave the cucumbers covered with the vinegar; seal them up same as canned fruit.

MUSHROOM CATSUP.

Break the mushrooms up into small pieces; but a layer of them in a jar, sprinkling salt over them alternately, until you have salted all you mushrooms; let them stand three or four days; then boil and strain, squeezing them well; then boil the liquor up with cloves, mace or any spices you prefer; when cold and clear bottle, putting in a clove of garlic or small onion and some horse-radish.

LEMON PIE.

The juce and rind of one lemon, one cup of water, one tablespoonful of cornstarch, one cup of sugar, one egg, and a piece of butter the size of a small egg for one pie. Boil the water; wet the cornstarch in a little cold water; put into the boiling water and stir until it boils up, then pour it upon the butter and sugar; after it cools add the egg and lemon; bake with an upper and lower crust.

RECIPES.

BY NELL VAN.

TO CLEAN ZINC SINKS

there is nothing superior to coal oil used by saturating a woolen cloth, with which rub the sink thoroughly until all stains and roughness are removed, after which remove the odor of coal oil by the use of hot water and soap.

[Lime makes an excellent polish for zinc.—Ed.]

TO PRESERVE SAUSAGE.

When the meat has been nicely ground and seasoned, make it into small, flat cakes; place them in a frying pan and cook until about half done, (this is for the purpose of making them hold together,) then pack them closely in five-pound tin cans, and pour over fresh lard until filled. Sausage put up in this way will keep perfectly sweet and fresh for three or four months.

Household Reading.

A Deed and a Word.

A little spring hath lost its way
Amid the grass and fern;
A passing stranger scooped a well,
Where weary men might turn,
He walled it in, and hung with care
A ladle at the brink;
He thought not of the deed he did,
But judged that toil might drink.
He passed again, and lo! the well,
By summer never dried,
Has cooled ten thousand parched tongues,
And saved a life beside.

A nameless man, amid a crowd
That thronged the daily mart,
Let fall a word of hope and love,
Unstudied from the heart;
A whisper on the tumult thrown,
A transitory breath;
It raised a brother from the dust,
It saved a soul from death.
O germ! O fount! O word of love!
O thought at random cast!
Ye were but little at the first,
But mighty at the last!

FASHION.

BY REPORTER.

WHILE walking the street a few days since, my attention was attracted to a young lady on the other side, who, having her hands encumbered with books, basket and umbrella, was apparently hesitating whether to cross or not. She looked behind her, then at the mud. Her features wore a look of utter despair; yet she hesitated but for a moment, then stepped boldly out into the slush and mud; and —O, my! Training? Yes, trailing after her an

enormous amount of dress-goods. Again she hesitated a moment at a little puddle, then stepped *into*, instead or over it.

I thought, "Why does she this?" Another glance, and the question was answered. She was dressed in accordance with the edicts of Fashion.

As she passed me, I stole another glance, with this result: I saw a large, well-formed head, a full, round forehead, showing a large and active brain, smooth, even features, and the general appearance of a student. Yet, with these natural gifts and educational advantages, she was a slave! Why was it?

With this question haunting my mind, I sought an interview with the Empress of Fashion herself. Passing over the introduction and little preliminary remarks incidental to such a call, I will simply say, I found her genial and obliging, apparently quite willing to answer my questions. I give our conversation in full.

Reporter—What is the extent of your domains?

Fashion—My domain is the whole earth—the land and the seas alike;—or, as you Americans say, "there is no north, no south, no east, no west." Wherever man is, there are my agents.

R.—What is your power or authority?

F.—My power is absolute. There is no higher authority—no court of appeal. Some one has said: "Better be dead than out of fashion,"—using my name figuratively. This is now generally believed, for the results of failing to comply with my commands are too well understood and dreaded.

R.—Who are your subjects?

F.—All mankind, without regard to rank or station. The savage Indian builds his wigwam, paints his body and scalps his victims in accordance with my commands, The millionaire erects his mansion, clothes his person and gives to the poor by the same authority. The heathen and the Christian alike look to me for models of architecture for temples to their gods.

R.—Does civilization detract from your powers?

F.—Oh, no; it rather adds to it; for, as civilization advances, wealth increases; and this gives me the key to these, the civilized colonies: they require variety, and it is through their wealth that I am enabled to give it to them. It is with these colonies that I take my greatest pleasure. I delight in varying their dress. The styles of yesterday passed with the day. The pull-back dress and spring-bottom pants, the one-sided hat and long-toed boots I shall soon throw away, and so on throughout time.

After the fair lady had given me her opinion of the effect of her rule, I bade her adieu, my mind filled with many subjects for reflection, which I intended to have included in this article, but it is now much beyond the desired length, so I will leave you to draw your own conclusions.

POPULARITY.

BY NEMO.

This, that and the other matter are often said to be unpopular. In the same sense, this, that and the other individual are often said to be unpopular. And, pray, what is popularity? A mere bubble, unless it is used as an influence for some personal ends.

It often happens that the most unpopular individual leaves a valued record. The world, though progressive on the whole, does not show its progress in the footprints of individuals. Nevertheless, individuals are the landmarks, the guiding spirits through which progress is developed.

Truth, in its march, has many obstacles to encounter; but it is a kind of positive element that supersedes and displaces error, so sure as truth is good and error is bad. It is only a question of time.

The firm individual, who plants himself on the ramparts to do battle for principle, who has no compromises to make with wrong, is goaded and maimed at every turn, till truth forces itself uppermost.

The most popular class in the world are those who, though they may have opinions of their own, are governed more by circumstances than by their opinions—more by policy than by principle. Hence, the individual of positive and affirmative character has no negative principles. In God, or truth, or principle he trusts. To him

An approving smile from the wise and good
Is preferred to the shout of the multitude.

He does not seek the honors and emoluments of the world at the expense of his own individuality and his own manhood. Not being dependent on others for his thoughts, he is independent in his mode of reasoning. As he reflects his own thoughts in his own language, how *not* to say things is one of the fine arts to which he lays no claim; and he often says things too blunt for the undecided, and too unpopular for the equivocating or negative mind. Therefore, as a reward for the personal sacrifices he is always making, he trusts to time to vindicate him. His reward seldom comes to himself personally; but, like the great American statesman, Henry Clay, he feels that "he would rather be right than to be President." But what kind of phrenological organization does it take to make the popular man of the world? The question needs no answer.

MORE THAN ONE WOMAN IN THE HOUSE.

GRANDMOTHER'S ADVCE.

There should be two women in every house, especially the farm house. We do not mean by this, gentlemen, that every man should have two wives. Oh, no! But we do mean that friend, mother, sister, aunt, grandmother—somebody—should be companionship for the main housekeeper.

We will take the case of a family consisting of six members—father, mother, and four children ranging from one to ten years. They live on a grain fraim. The children are not old enough to do farm labor, therefore help must be employed—from one to three men—making from seven to nine in family.

How much of sunshine and free air may we conclude this housekeeper enjoys? How much time among the flowers? How much time to read and keep posted, so that when company calls she can converse with her husband and them on the various topics of the day? How much time to call out the minds of her children, and instruct them as only a mother can? Perhaps an hour or two on Sunday, provided that then there are only two meals.

How different would it be if only some one were with her, to change work with her and allow her to work among the flowers now and then by way of change, or spend a half hour in the poultry yard among the young broods, or in company with the children to go and gather bouquets of wild flowers by way of diversion—anything to permit the mother now and then to relax her nerves, to throw off restraint, and yet feel that the wheels of the household are not clogged the moment her hands cease to labor. Oh! if *men* only knew how much of sunshine they shut out of their own presence, out of their own domain, by having a weary, tired companion about them, instead of one able to give off vitality to husband and children!

But vitality cannot be manufactured and cheerfully maintained without the presence of certain elements. Fresh air, sunshine, cheerfulness and rest from care are Nature's great restorers. While nine-tenths of the farmers' wives have been, and are to-day, using up not only all their natural strength, but using additional stimulus to carry on their work—instead of enjoying the situation, the lovely scenery of the country, the free air, the groves and flowers—they find country life a constant wear and tear of nerve force.

I could write a book on this subject and minor ones connected with it, but will conclude by saying, See to it, O, man of the farm, that there are two women in your household, even if one should be only a Chinaman. Anything to give relief to the tired wife and mother is better than to let her wear out with hard work, anxiety and suffering. But better than a mere servant is a companionable person, a relative or friend, whose service is not only paid for but is sought after and reciprocated in kindness and mutual sympathy and human equality.

DRIFTING DOWN THE STREAM OF LIFE.

BY BLANCHE.

Down the stream of life we are drifting. Our boat at first glides smoothly along over the ripling brooklet; the shining pebbles glitter in its bed; the trees and shrubs, in their robes of green, stretch forth their moss-covered, ivy-mantled arms to shelter and protect: the merry birds twitter among the boughs, while the rising sun drapes the landscape and the stream in beauty's most adorning robes; the over-hanging branches, softly swayed by gentle zephyrs, drop their brightly-tinted blossoms, which dance and wrestle with the waves, then quickly disappear; here and there a modest lily peeps above the water's edge; all is gaiety, hope and happiness. Pure and undefiled as the flowers on the brink, we thoughtlessly sail down the stream.

The winding, rippling brooklet is changing; gliding away are childhood's happy hours. In youth and manhood we find ourselves in a wider, deeper stream, surrounded by objects more striking and magnificent—by dashing waves, whistling winds, tumult and confusion. One moment we are in fancied security, the next, in the greatest danger; for a while elated by success, then depressed and miserable with disappointment. When shipwrecked, we strive in vain to anchor;—our voyage may be hastened—it cannot be delayed. Time, the stern boatman, has unfurled the sail, and on we are borne, our joys and our griefs alike left behind. Too soon we feel the chill of winter, and snow-flakes may be seen falling on the golden hair. Wave-tossed, weary and worn, our frail bark bears us on until we hear the rushing tide, are launched into the ocean, and wafted over the crested waves to the "better shore of the spirit land," just as the setting sun of our life-day sinks to rest beneath the waves, painting with its gorgeous tints landscape, sky and sea.

WHAT MEN NEED WIVES FOR.—It is not to sweep the house, make the bed, darn the socks and cook the meals, chiefly, that a man wants a wife. If this is all he needs, hired help can do it cheaper than a wife. If this is all, when a young man calls to see a lady, send him into the pantry to taste the bread and cake she has made; then send him in to inspect the needlework and bed-making, or put a broom in the young lady's hand and send him to witness its use. Such things are important, and the wise young man will quickly look after them; but what the true man wants with a wife is her companionship, sympathy and love. The way of life has many dreary places in it, and man needs a companion to go with him. A man is sometimes overtaken by misfortunes; he meets with failure and defeat; trials and temptations beset him, and he needs one to stand by and sympathize. He has some hard battles to fight with poverty, enemies and sin, and he needs a woman that, when he puts his arm around her, he feels he has something to fight for, and that she, being a true woman, will help him to fight; that she will put her lips to his ear and whisper words of counsel, and her hand to his heart and impart inspiration. All through life, through storms and sunshine, through conflict and victory, through adverse and through favoring winds, man needs a woman's love. His heart yearns for it. A sister's or a mother's love will hardly supply the need. Yet many seek for nothing further than success in housework. Justly enough, half of these get nothing more; the other half, surprised beyond measure, have gotten more than they sought. Their wives surprise them by bringing out a noble idea in marriage and disclosing a treasury of courage, sympathy and love.

Husbands and Wives.

HUSBANDS.

Appleton's Journal says: Ingratitude and indifference sometimes mar the character of men. A husband returns from his business at evening. During his absence, and throughout the live-long day, the wife has some little surprise, some unexpected pleasure, to make his home more attractive than ever. He enters, seemingly sees no more of what has been done to please him than if he were a blind man, and has nothing more to say about it than if he were dumb. Many a loving wife has borne in her heart an abiding sorrow, day after day, from causes like this, until, in process of time, the fire and enshusiasm of her original nature have burned out, and mutual indifferences spreads its pall over the household.

WIVES.

Many women have little idea of how greatly they shock the tastes and really endanger the affections of their husbands by their unseemly domestic apparel. There is not a man of sense and refined feeling anywhere who would not prefer some simple and chaste adornment for the wife in the morning to any extreme of splendor at the evening ball. Let a woman by all means dress brilliantly on those occasions that render it proper. We have no desire to abrige her privileges nor baffle her instincts in this particular; but we claim that it is important for her, if she value her household serenity, that she should give equal heed to her customary domestic attire. The female who goes about the house untidily dressed has no right to the title of woman. She is without those marks and indications by which she can be so classified.

HELP—HOUSEHOLD HELP.—Men often

fail to consider how great is the need of help for those in charge of the household. The wearied, worn wife and mother would be glad to have some one help her, if but to do some of the lighter work; but she too often finds the help hired more annoying and troublesome than would be the doing the work herself. The cry comes up continually for help, good, reliable, willing workers, who are ready and willing to take hold and work, and to learn to do what they do not now understand how to do. This cry comes from the country as well as from the towns and cities. It is not the cry of distress, coming from those sinking amid the waves of the surging sea; but it is the cry for help from those who are worn down with labor, wearied with engrossing cares and anxious waiting for a change in troublous times. It is a constant working, watching, waiting strain between *no* help and *poor* help, that is killing many a fond mother working to keep the family agoing. Will not the boys and girls, and the father too, open they eyes to these things, and turn a helping hand to lift the weight that is slowly, but all too surely, wearing away the life of her whose only object now is to sustain her husband and children?

UP-COUNTRY LETTERS---NO. 6.

BY RACHEL A. ELY.

Imagine *me*—yes, it is myself, truly—able to be nurse to one more unfortunate and ailing than I am. Even so. My hostess, out of Christian kindness (though she smilingly disavows being a Christian, but I'd like to know what it is then) undertook to help the sick woman, and finding her no worse the day following her first treatment, she again went to work, giving head and sits baths, hot packs, tepid injections to the bowels, copious water drinking, and, best of all, hope and rest. (You see I talk quite learned already, and I intend to be more learned some day.) But as it is impossible for her to be here and see that her orders are obeyed, and there is no other woman to be had for miles around, I have offered to give my little mite towards Christian aid. So my good friend comes over after her own work is done, and baby asleep for the children to watch, and gives what treatment is needed and leaves orders for what is to be done, and I can see they are executed by her oldest girl, who is a very capable child, and, like her mother, a worker. The husband, too, gives as much of his time as he can from the harvest field, doing much of the cooking (I wonder how he likes "three meals a day"),

So here I sit, watching the half-unconscious life on the bed, and think and wonder if it indeed is *I*, who only six short months ago was "waiting, only waiting" for death to relieve me of all aches and pains and set my spirit free. How long the time seemed then, while now how swift the days go by, when looking ahead to coming strength and health. You of robust body and sound head cannot understand nor sympathize with us invalids who have almost felt the icy breath and unloosed so many earth ties that life itself had lost all but the dim and far off hope that to live meant to help to make the world and its people better, if possible. Right, for right's sake, not from fear of doing wrong. And above all, have I felt how untruthful and faithless are the lives of the masses. Welladay! Let me endeavor, Oh! Wise, All Father, to be true to others and myself, if indeed my life *is* to blossom into flower on this earth. May the fruit thereof be worthy the deep soul pruning and heart culture received and endured.

If this sick woman gets well—and it may be so—I wonder what the doctor will say- and also whether the husband will be quite as generous as he thinks he will be. Half his farm is the price he declares he will give to save her. I do hope he will have the opportunity of helping these poorer neighbors, or at least speak in kindness of them and their odd ways. We will watch and wait.

AN "INGLEWOOD" SENTIMENT.

Mr. Editor: As "Aunt Mary" and friend "Inglewood" have been publishing their love letters in your interesting journal, as I suppose, for the benefit of your readers, I will ask permission to suggest a few friendly criticisms.

In "Grandfather's Letters, No. 9," the "trio" seem to be sufficiently satisfied with friend Inglewood's sentiments, as expressed in his letters, to invite him to call and make a closer acquaintance, and if, on further acquaintance, they find nothing more objectionable than what has already been shown, his prospects will be encouraging. Now, I wish to suggest to "Angio" that I am afraid she has overlooked one sentiment expressed in Inglewood's letter No. 8, where he explains himself on the "masculine supremacy" that he has been asked about. He says, "it is to the husband's home and business, style and mode of life the wife always comes, hence *he* only is competent to judge how far he may deviate from that course." Now, my dear sister, what are to infer from this sentiment? So far as I understand it, he will expect you to look upon the home, with all its appurtenances, as belonging to *him*, and that you will accept the situation in that home as his wife and governess to conduct the institution according to *his* will and pleasure, whether it suits *you* or not; for, mark you, he says "to the *husband's* home," etc., and "*he* only is competent to judge" if there shall be any change.

Now, lest I seem wearisome, I will close for the present by asking to be excused for meddling with other people's love letters. Girls' Rights.

Soquel, June, 1876.

A DO-NUT TO CRACK.

Mr. Editor: I wish to ask, through your columns, a little more information from "Snip." In the last (June) Agriculturist she gave some receipts for cake that would lead anyone to think that she had reached the hight and depth of economical art. In my housekeeping I wish, and try to be as economical as possible; but I must confess that I don't see how anyone can make doughnuts without flour, and have them good enough for the fastidious "Mary Mountain" to praise. My effort to make any eatable of them was a decided failure, but did not discourage me from trying the receipt for cookies, but with no better success. My experiment led me to conclude that she must understand a trick of the black art that none of the most learned professors has yet conquered. I hope the art is no great secret, because a knowledge of it will be hailed with joy, and she who can tell how to cook without eggs and flour will confer a lasting benefit on impecunious humanity.

San Jose, June, 1876. Ansie.

What can be more disastrous to the farmer, than to invest all his money and strength in one crop, which, may fail in a bad season, or if the price is low it will scarcely pay for the cultivation.

Boys and Girls.

Dandelion Clock.

Clock, white clock, that grows on the lea,
Tell the hour of the day to me;
Puff, puff, puff—one! two! three!
Dear, how late for school I shall be!
Clock, you've made a mistake you know;
You did not strike an hour ago!
Time flies fast on a morn in May;
Faster even than holiday.
But puff, puff, puff—one, two, three—
Surely so late it cannot be,

Clock, white clock, that grows on the lea,
When comes one to marry me?
A fairy prince with a crown of gold,
As he came to Cinderella of old;
His cloak of the violet's purple bloom
And in his hat a fair white plume?
Puff, puff, puff; puff and blow;
Silly clock will you never go?
Such a long weary time will it be
Ere my fairy prince shall come for me?

Clock, white clock, that grows on the lea,
Tell me what shall my dower be?
How many guineas of shining gold
Shall I count in my lap to have and to hold?
Enough to buy castles and acres fair,
And costly silks and jewels to wear?
Puff! What, all gone in one breath! Ah! me
For my jewels and castles and ships at sea!
Clock, white clock that grows on the lea,
You've no pleasant tidings to-day for me.

—[Mrs. Broderik.

"OUR CORNER."

River and Mountain Lesson.

SEVEN little boys and girls have sent in lists of rivers and mountains, competing for the premiums. First comes our little niece Olive Bouline of Saratoga, Cal., with 26 mountains and 79 rivers. Olive, you did not give your age, but you deserve credit for making out your list very neatly. This is what Olive writes:

Aunt Polly: I like the little folk's corner so well that I thought I would write you a few lines, though I am afraid my letter will not be very interesting. I found 26 mountains and 79 rivers west of the Rocky Mountains. Good by.

Olive.

Well, Olive, the only way to write is to *try*, and you have done pretty well.

Next comes our little Laura, and this is how she writes:

Dear Aunt Polly: I am 14 years old, and I have made a list of the rivers and mountains west of the Rocky Mountains. I have found 54 mountains and 146 rivers. Yours, truly, Laura Burdeck.

Pomona, Los Angeles Co., Cal.

Your list is very well gotten up, Laura. You write a very plain hand, and have numbered each one in rotation very nicely.

And next comes Master Alther, right into the Agriculturist office with his list. The printer told him he should write a letter to Aunt Polly, and with a pencil at the table he wrote the following in less than five minutes, without a single mistake:

Dear Aunt Polly: I saw the puzzles and geography lesson, but as I am not a good hand in guessing puzzles, I tried to see how many rivers and mountains west of the Rocky Mountains I could get. I got 177 rivers and 71 mountains. Next time I hope I will do better, if there is anything like this. Yours, respectfully,

Alther Feldman, San Jose.

Thank you, Alther. It is a very good ambition to have, to want to do better. That is why you have done so well now.

Now comes a little niece from as far away as Michigan. Hear what she says:

Dear Aunt Polly: My uncle takes the Agriculturist. He got home from California the 21st of April. I read the Agriculturist, so I thought I would try and see how many rivers and mountains I could find west of the Rocky Mountains. Here is my list of 78 mountains and 132 rivers. I was 10 years old last February. My uncle likes California real well, and when we sell our place here we are going out there to live.

Good by. Lucy Ford.

Strickland, Isabella Co., Mich.

Very good, Lucy, for a girl of 10. You are the only one who classified your rivers and mountains by Territories and States, but you mixed the names together too much on the page. Aunt Polly thinks you are ahead of any of your age in the class.

Our little niece in Salinas comes next. Hear her.

Aunt Polly: I tried to see how many rivers and mountains I could get. I found 100 mountains and 140 rivers. I am 12 years old. I shall have to stop.

Yours, truly, Gertie Smith.

Salinas City, May, 1876.

Now, Gertie, if you had not said "I shall have to stop," your letter would have been just as good. Your list is very neatly gotten up, not mixed at all, but every one plain. You deserve a credit anyway.

From Plymouth, Amador Co., comes our little niece with more mountains than anybody. Here what she says:

Dear Aunt Polly: I was fourteen years old last January. I have got 309 rivers and mountains and peaks. I did not know whether you would count peaks or not. Good by. Your niece,

Sarah Salle.

Aunt Polly finds that Sarah has 118 mountains and 191 rivers, which is a very good list indeed. If you had taken a little more pains in arranging your lists, it would be much easier for your Auntie to examine them and for the printer to set them in type. Your list of mountains will be found below. But, first, we will introduce you to Walter King, of Mountain View, who brings in the largest list of rivers, 274, and 101 mountains. Well done, Walter. Walter writes a very short letter:

Aunt Polly: I have done the best I can for mountains and rivers. I am 13 years old. Walter King.

We shall give Walter's list of rivers; but, first, one word. Aunt Polly offered the one under 10 years old who sent the most names of rivers and mountains a pair of chromos, also to the one under 12, and to the one under 15 years, who would send the most names of mountains and river a pair of chromos. Olive Bouline and Laura Burdeck have not told how old they are. So Aunt Polly will have to do this: send a pair of chromos to Lucy Ford, 10 years old, for rivers and mountains; one chromo to Sarah Salle, for most mountains; one to Walter King, for most rivers; Alther Feldman, 11 years, one chromo, for rivers, and Gertie Smith, 12 years, for mountains, one. This makes the three pairs of chromos, and distributes them as evenly, according to merit, as Aunt Polly knows how.

The lists of mountains and rivers which follow are the largest sent in, but do not include all withing United States territory on the Pacific Slope. So now listen to this

PREMIUM OFFER.

The one who will add to these lists the most names of rivers and mountains (to be found in United States and Territories west of the Rocky Mountains) a fine chromo of "Romeo and Juliet" or of "The Meeting at the Well" will be given. Now make this list as complete as possible. You have to the 10th of August to try in. The premiums for best puzzles will be continued from month to month. Now Aunt Polly wants you all to do your best, and you will try, wont you?

RIVERS (WALTER'S LIST).

Turtle, Colorado, Bill William, Big Sandy, Canon, Rio St. Maria, Rio St. Francisco, Colorado Chiquito, Bouche Fork, Chevlons, Cottonwood, Salinas, Puereo of the West, Mineral, William Fork, San Carlos, Ayisl, Pricto, Domingo, Santa Cruz, San Pedro, Vermillion, Elk Heak, Yampah, White, Oconagan, Oalesteo, Rio Puerico, Virgion, Skagit, Conejos, Dd Chaco, Rio Chilo, Swamish, Chekalis, Taxpam, Green White, Pisqualla, Cowlity, Coweema, Touchet, Caladum, Cathlapootle, Yahkeet, Columbia, Walwalla, Snake, Pelcose, Pisco, Yakima, Athnam, Nachees, Wenass, Pischous, Yakmsee, Spokane, Snaqualmie, Stalnkahamish, Kicketat, Clarke Fork, Feather, North Fork, South Fork, Tunis, Butte, Chico, Deer, Antelope, Beaver, Battle, Cottonwood, San Mateo, Canoe, Pitt, South Fork, Susan Pasa, Pahute, Beaver, News Fork, Green, Port Neuf, Tullick Fork, Smith's, Godin's, Hellgate, Flint, Black Foot Fork, Rio de San Jose, Rio de Chaca, Zuni, Gila, Timbres, Bear, Bonito, Yuba, St. Geraldie, San Inez, Santa Clara, San Gabriel, Santa Anna, San Jose, St. Luis, Pahute, Mohave, Kern, Pasa, White, Tule, Owen's, San Joaquin, Kings, Fresno, Chowchilla, Mariposa, Merced, Piedras, Tuolumne, Vierengs, Stanislaus, Calaveras, Grand, Mokelumne, Casumnes, Sacramento, American, North F'k, Middle F'k, South F'k, Humboldt, Granite, Truckee, Black River, Carson, Walker, West F'k, Rves, Putman, South Humboldt, North F'k, Rio Vegas, Virgin, Little Humboldt, White, Quns, American, Red F'k, Fish, Lake F'k, Spanish F'k, Weber, Jordan, White F'k, Black's F'k, Muddy, Ham's F'k, Jewett, Green's, Sevier, Canon de Chelly, Clara, San Jann, Bitter Root, Lo-Lo, Flathead, Rock, Salmon, West F'k do., Goodins, Lemhi, Big Wood, McArthur's, Kootenai, Clark's F'k Columbia, Big Snake, South F'k, North F'k St. Joseph, South F'k do., Clearwater, Upper Palouse, Wisser, Payette, Boice, Owyhee, Catharine, Bruneau, Malade, Middle Boice, South do., Bear, Pannoc, Lewis F'k, Cedar Springs F'k, Goose F'k, Salt, John Gray's, Henry's Fork, Nehalem, Alseva, Yaquuna, Sinslan, Hood River, Willow, McCready, Rogue, North Umpqua, South do., Willamette, Coquill, Nolalle, Clackmas, Calapooya, North Santium, South do., Lonk Tom F'k, McKenzie's, Sandy, John Days, Butter, McCready, Owyhee, Malkuer, Burnt, Powder, Fall, Cherry, Crooked, Sylvees, Grande Ronde, Umtatilla, Elk, Lost, Jordan, Granite, Guamas, Salinas, Smiths, Elk, Pelican, Klamath, Shasta, Redwood, Scott Mountain, Salmon, Eel, North F'k do., South F'k do., Trenitz, South F'k, Johns, New, North F'k, Big. Youga, Vandusens, Bear, Mad, Napa, Marion's, Bootham, Gassier, Wohalla, Russian, West F'k, Pajaro, San Benito, Nacismento, Rio Secco, St. Maria.

MOUNTAINS (SARAH'S LIST).

Pinos, Arrington, Bakoit, Olympus, Constance, Cascade Range, Runier. St. Helena, Adams, Coast Range, Gavilan, Blue, Sierra Nevada, Siskiyou, White, Pitt River, Humboldt, Hamilton, Lewis, Brewer, Day, Whitney, Tamalpais, Oso, Pierce, Baker, Shuksan, Granite, Dana, Cedar, Diablo, Mayacans, Balldy, Lyel, Tyndal, Toyabl, Granite, Kawlah, Santa Cruz, St. Luisa, San Bernardino, Rogue River, Bishop, Hornet, Sweetwater, Elk, Uintah, Wasatch, Jefferson, Yallo Balla, Hood, Spring Range, Callapooya, White Pine, Salmon River, Graham, Northside, Dome Rock, Davis, Spring, Glacier, Soledad, Sierra Lasal, Sierra Abajo, Wind River, Hornet, Hope, Pelon, Caso, Uarezo, Monument, Santa Inez, Eden, Mongollon, Coeur de Areme, St. Helena, Cedar, St. Johns, Saddle, Scott, Lynn, Umpqua, Ripley, Shasta, Inner Coast Range, Half-way, White, Zaremba, Iron, Pictos, Sierra De Platta, Diablo, Black, Campbell, Sierra Madre, Bielawski, St. Elias, Carezo, Uminhan, Mary's Peak, Castle P'k, Jeff. Davis P'k, Cannon P'k, Carrey's P'k, Spanish P'k, Humbuk P'k, Seven P'ks, Conie P'k, Pilot P'k, Lassen P'k, Pyramid P'k, Diamond P'k, Bartram's P'k, Mud Lake P''k, Novacam P'k, Pilot P'k, Umunhom, Snow.

Now, geography class, how many mistakes do you find in these lists?

PUZZLES.

A kiss for Daisy! for she is our youngest contributor. See what a nice letter and puzzle written by her own tiny fingers:

ST. HELENA- June, 1876.

Dear Aunt Polly: My papa takes the AGRICULTURIST and I like it very much. I love to make out the puzzles. I hope you will have one every month. I am eight years and a half old. I have no brothers or sisters. I send a puzzle.
My first is in wall, but not in floor;
My second is in bonnet, but not in hat;
My third is in girl, but not in boy;
My fourth is in lamp, but not in light;
My fifth is in orange, but not in lime;
My sixth is in leaf, but not in tree;
My whole is the kingdom we belong to.
Good by. From DAISY GLOCK.

LIVERMORE, June, 1876.

Dear Aunt Polly: I received my pictures. I think they are little beauties. Mother said for me not to make up a puzzle, but I have made up a small one, which I will send you. I think it splendid fun making up puzzles, and hope you will send us something that way every month. Here is my puzzle:
I am composed of 51 letters.
My 1, 3, 4 is a small insect.
My 1, 14, 20, 36, 25, 3, 46 is one of the Territories of the United States.
My 28, 46, 26, 29 is a small animal.
My 30, 38, 44, 31 is a color.
My 28, 6, 50, 40, 39 is a domestic animal.
My 5, 6, 21, 23 is what some children do when they get angry.
My 10, 3, 20, 25, 3 is a vegetable.
My 34, 35, 14, 16, 8, 13 is a color.
My 19, 20, 32, 15, 20, 45, 23, 26, 16, 34, 20 is one of the United States.
My 11, 47, 6, 35, 17 is something necessary to life.
My 22, 20, 48, 49, 25, 3 is a poet.
My 5, 10, 27, 46, 49, 6 is a vegetable.
My 18, 24, 12, 20, 13 is a girl's name.
My 22, 1, 3, 51 is a pronominal adjective.
My 34, 28, 20, 7, 6, 15, 10, 5, 28, 9 is a branch of study.
My 41, 20, 37, 36, 20, 13 is a name.
My 13, 18, 29, 31, 39, 12 end time and commence eternity.
My whole is a puzzle for the cousins.
Your niece, JENNIE D.

This is a pretty hard puzzle of the kind. Who can unravel it for Jennie?

MILPITAS, June, 1876.

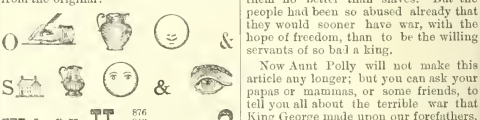
Aunt Polly: I felt very much flattered to see my letter published in the AGRICULTURIST, and thought I would try to merit a premium this time. Here are my puzzles:
1.—My first denotes a female; my second, what she wears; my whole, what she eats.
2.—I am composed of nine letters.
My 4, 6, 3 is a weight.
My 3, 2, 4 is good to eat.
My 5, 2, 4 is to place.
My 9, 6, 2 is who I am writing this for.
My whole is one who is much loved by many little children.
3.—I am composed of 16 letters.
My 7, 8, 9, 10 is something I don't like to do.
My 14, 3, 12 is a weight.
My 8, 9, 10 is a tree.
My 9, 10, 11, 12 is a bart of the body.
My 13, 6, 15, 5, 2 is a boy's name.
My 10, 6, 16 is a fowl.
My whole is the name of a great man whom this year brings forcibly to our minds.
4.—I am composed of 15 letters.
My 1, 13, 14, 4, 5, 2 is a girl's name.
My 12, 2, 14, 15 is an enclosure.
My 1, 13, 14 is to spoil.
My 1, 9, 10, 11 is where minerals are found.
My 14, 6, 3, 11 is uncommon.
My whole was the home of an illustrious person.
Yours, TILLIE.

A pretty long list Tillie. The Editor thinks the first one very good. Who can guess?

LIVERMORE, June, 1876.

Dear Aunt Polly: I did make out 334 different words from the word "carpets." I tried to see if I could make a puzzle. I have no idea of getting the chromos at all, but I thought it best to try. If you like it, I will send you another. Did I not send the greatest number of words of any of the girls? I will think it splendid if you send me the chromos. I had given up all hope of getting them until the other day my papa said, "May, Aunt Polly writes to you," then I read it. Well, Auntie, I must close.
Your niece, MARY D. CLARK.

Well, Mary, Auntie thought you deserved them, and so sent them. Here is Mary's funny rebus, a little changed from the original:



A friend sends this to "Our Corner":
My first is in bad, but not in good;
My second is in wood, also in could;
My third is in yours, but not in mine;
My whole is loved by sister mine.
L. W.

CARPENTERIA, May, 1876.

Dear Aunt Polly: I saw in the May number of the AGRICULTURIST that you offered chromos to those who would get over 359 word from "carpets." I got 377 words, and I send them to you. If you think they are able to get the chromos, my name and address is Linnie B. Caldwell, Carpenteria, Santa Barbara county, Cal.

P. S.—I am 13 years old. My sister wants to know if she can come in. She is 15 years old. L.

Yes, Linnie, and as you have beat them all, although late in the day, you shall have them. Tell your sister to consider herself a niece, and Polly her aunt, and that Aunt Polly hopes to get something good from her.

SOMETHING ABOUT THE CENTENNIAL.

BY AUNT POLLY.

"Auntie, where is the Centennial, and what makes folks talk so much about it? What is it for?" asked our little Willie the other day, and Aunt Polly had to explain how one hundred years ago (one hundred years is a century, you know) the English settlements in America—our country—belonged to England; that is, the English King claimed the right of governing the people in this country, as he had done for many years. Then she had to tell Willie how dissatisfied our people became with the English King through his bad ruling; how selfish and mean the King was; and how at last, just one hundred years ago this fourth day of July, 1876, (which was the fourth of July, 1776,) a meeting was held at Philadelphia composed of fifty-six men, chosen by the people of the different colonies, to get together and talk about laws and try to make things better; how these fifty-six men finally resolved, in the name of all the people of the thirteen States then United, that they would be free from King George, the bad English King, and that they would make a better government of their own, a government of the people of all the States of America. And these fifty-six good and wise men, called Representatives because they represented the sentiments and wishes of the people, all signed a paper called the Declaration of Independence. This paper was so called because it contained words declaring that the people would no longer be ruled by King George, and that they would have a government separate from, and independent of the King. Then the people all rejoiced, although they knew that King George would send great armies of soldiers across the ocean in ships of war to fight them and murder the people and destroy their property and try to make them no later than slaves. But the people had been so abused already that they would sooner have war, with the hope of freedom, than to be the willing servants of so bad a king.

Now Aunt Polly will not make this article any longer; but you can ask your papas or mammas, or some friends, to tell you all about the terrible war that King George made upon our forefathers, and how at last he was beaten and obliged to call his soldiers and his war ships home, and leave this country *free and independent*. Perhaps your folks would get you a child's history of the United States—our loved country—if you will promise to read it, and then you can know all about it for yourself. This year is the Centennial, because it is the hundredth birthday of our Nation, and the great Exhibition at Philadelphia is made in honor of our great birthday, and is really a national birthday party.

Dear children, Aunt Polly intended this month to tell you all about a children's school in San Jose, which is kept by a very benevolent and kind lady, who acts at once as mother and teacher to all her pupils. This good lady is herself a

cripple; but through her energy and love of doing good she has adopted several children. These she supports, besides teaching many others and caring for fatherless and motherless ones for very little compensation. This good lady's name is Miss Otterson, and her school is called the Children's Home, and as she loves children and is very good to them, Aunt Polly promises to tell you about her school next month; she would do so now, but the room in Our Corner is already pretty well occupied with other matters.

THREE IMPORTANT QUESTIONS.

ED. AGRICULTURIST: Observing from your editorial notes that you are always willing to disseminate information to the people, but more especially for the benefit of you numerous subscribers, allow me to suggest, for your consideration and approval, appropriating a small space in your columns to the promulgation of three laws passed by the last Legislature of great interest to the agricultural community, viz.: Amendment to the Fence Law, Amendment to the Road Law, and Lien on Stock for Pasturage.

The No Fence Law was brought into existence to promote immigration quite regardless of the interesests of the early settlers, and which has been fraught with much annoyance and vexation. Smith's fence was blown down by the winter blasts. He was protected from going to the expense of repairing it, and his neighbor, Jones, was compelled to fix it, or sell his six cows he kept for family use, or Smith would impound them.

The Road Law is another vexatious question. Persons having land back from the county road have to purchase their way through, after a delay of six months in petitions and surveying.

Farmers who take stock in on pasture are at great loss by dishonorable men who withdraw their stock surreptitiously by moonlight, and they are protected by inability to attach that by which he obtains a living.

Without further comment, I remain,

Yours, repectfully, P. HANSON,
Clayton, Cal., June, 1876.

[We invite our readers to discuss these three questions. Our columns are open. Now let everyone interested give his ideas.—ED.]

Fruits retail at higher rates in San Jose than any stranger, knowing how much fruit is produced here, would suppose. Strawberries average higher than in San Francisco, as our retail dealers ask a higher profit, and have to pay San Francisco wholesale prices. Other small fruits are governed by the same rule. Every year the fruit crops, as they are growing in the orchards, are nearly all bought up by either local or San Francisco dealers, mostly Italians, and the combination thus formed extorts high prices for everything at retail. The cherry crop has been very fine this season, but prices have ranged from 12 to 35 cts. per pound, in the midst of plenty.

The fruit canning factories consume large quantities of excellent fruit, which they contract for mostly months ahead. It seems the more fruit there is produced the greater the demand, and at advancing prices year by year. There is now better encouragement for planting orchards and taking good care of them than ever before.

A friend that you can buy with a present can be bought from you.

Grand Summer Resort---Lake Tahoe.

Our readers will notice the advertisement of our friend, Dr. Bourne, a veucrable philanthropist and common-sense practical physician, who has established a cure at Lake Tahoe. As a guide to health and pleasure seekers, we copy from the Nevada City *Transcript* of June 13th, some remarks by that editor, who has just visited Lake Tahoe. He says:

Lake Tahoe ought to, and will be, at no distant day, the great sanitarium of the Pacific Coast. It possesses climate, scenery, and means of health-giving pleasure for the eare-worn and debilitated, far ahead of any other place of resort. Everything around it is intended to afford quiet rest and pleasure. The business man is bound to forget his business while there. The scenery is too grand, the air too quieting and dreamy to allow business cares to absorb the attention. Last week we had the pleasure of visiting the spot for the first time. The season for tourists has just opened there, and it is expected the number of visitors will be greater than any previous year. There are ample accommodations for all who may visit the place, The best way to reach the Lake is by way of Truckee.

There are row, sail, and steamboats on the Lake for the use of tourists. A person can leave Truckee in the morning, go to Tahoe City, take a steamer and go around the Lake, a distance of over 100 miles, have an hour at the Grand Central for dinner, and return to Truckee again the same evening. There is a new screw propeller being built, to be called the "Niagara," and which will be completed this week, which is intended to carry passengers and to draw another large boat called the "Floatng Palace." The latter has a ladies' saloon, a dancing hall, and nicely furnished state rooms, and affords excursion parties the opportunity to enjoy themselves in any manner they choose. The steamers on their round of the Lake stop at all points of interest.

The "Niagara" and the "Floating Palace" will be under the command of Captain Powell, an experienced mariner. The "Governor Sanford," "Governor Blaisdell" and the "Emerald" also run on the Lake and make regular trips.

Lake Tahoe, as is probably well known, is 6,216 feet above the sea level. Its depth is 1,525 feet. It is 35 miles long, 15 miles wide, and has an area of 525 square miles. The water is ice cold and of crystaline purity. It is surrounded by mountains on whose summits snow is visible most of the year. It is the most beautiful spot in the State, and should be visited by everyone who has a love for the beautiful and grand in nature.

Tahoe City is quite a little town. Besides the Grand Central, are the Tahoe Hotel, the Custom House, a store, and several other houses of business and places of residence. The Hot Springs Hotel is on the north side of the Lake. Glenbrook is on the east side opposite Taho City, and there are two hotels on the southeast side of the Lake, all of which places can be reached by steamer. Stages connect with steamers at Glenbrook for Carson, and one going to Virginia City will find the route from Truckee by the way of Glenbrook and Carson preferable to the regular route by railroad. We advise anyone who desires a pleasure trip and a season of rest to hie them to the summit.

Butter will remove tar spots. Soap and water will afterward take out the grease stain.

The Granaries of the Nile.

A San Francisco correspondent of the Baltimore *Sun* writes: Prof. Davidson has returned from a professional visit to Egypt. Having viewed the progress being made in opening cheap communication between Alexandria on the Mediterranean and the interior of equatorial Africa, he thinks it is high time for California to study the coming changes likely to affect the American interests. He tells us that the whole valley of the Nile, so far as its present navigation gives it boundary, does not exceed in fertile area the two continuous valleys of our Sacramento and San Joaquin rivers. But there are 500,000 acres now gradually being reclaimed by irrigating canals, which will add largely to its agriculture. Besides this, the gradual substitution of steam for the many thousands of hand and ox water-lifters along the banks of the Nile will increase the crops fully one-third. Three hundred and fifty thousand acres have been reclaimed by the present ruler, who has made irrigating canals next to the desert and back of the Nile, where the overflow of the Nile did not reach. The population is more dense than in Belgium, Europe's most densely-populated state. The improvements will give employment to all whom they will displace.

Assuming the valley to be 600 miles long and 10 miles average width, ending at the first cataract, the carriage of products is very cheap because it has free navigation. The several cataracts are being turned or otherwise made passable, so that very soon there will be steam navigation for 1,500 miles from the seaport to the beginning of the great Soudan country, and beyond this point there are now 1,000 miles of free boating, through a country of no mean productive capacity, including mines of gold, silver, copper, etc., and forests of valuable woods, mostly new to commerce.

The country known as the Soudan, though in the tropics, is tempered by its altitude. The Soudan is over 2,000 miles long, by probably 300 or 400 wide. It includes Nubia, Abyssinia, Darfour, Uganda, etc. It has a continuous expanse of the richest and best watered lands in the world, estimated at 200,000,000 of acres of two-yearly crop land, producing wheat, maize, barley, and other grains unknown to us, cotton, sugar, tobacco, wool, mohair, silks, coal, cabinet woods, ivory, peltries, ostrich feathers, etc. With labor ten cents a day, and the cost of transit proportionably low, compared with our rates, and a year's clothing taken at less than $5 per man—women at half price doing a man's work—it is certain that Alexandria is about to become the greatest center of supplies for all Europe. How can wheat from California or from any American port on the Atlantic enter into competition in the markets of Europe? There is surely approaching rapidly a radical change in the currents of commerce, and Alexandria is about to regain its former position of chief granary to the Mediterranean nations, which will now embrace all Europe. Unless America gives immediate consideration to these facts she will be illy prepared to meet, when it comes, the great commercial revolution.

We should practice temperance, if it were for nothing else but the very pleasure of it; it is the glory of a man that hath abundance to live as reason, not appetite directs.

Subscribe for the AGRICULTURIST.

The Reapers.

The reapers bend their lusty backs;
Their sounding sickles sway;
At every stroke the golden sea
Recedes to give them way:
The heavy ears fall bowing down,
And nestle at their feet,
Such will, such work as theirs, perforce,
Must win—must homage meet.

So careless of fatigue, they go,
So true, and steadily,
The admiring traveler on the road
Leans o'er the gate to see:
With marvel of the soon-fallen breath,
The lounging gossips tell;
But the reapers labor for us all;
'Tis need they should work well.

Ere the great sun that burns above
Shall crimson in the west,
And the children's poppy nosegays fade,
And they lie down to rest,
Each golden spear that upward points
Shall fall upon the field,
And the farmer fans his sweating brow,
Rejoicing o'er the yield.

Fly, bonny men, your sickles bright,
And give the people bread!
At every conquering stride you take,
Our wants and woe you tread;
Drop, heavy ears, and give the strength
You gathered from this plain,
That man may rise refreshed and firm,
And do great things again.

God bless the hands, all hard and brown,
That guide the cleaving plow,
That cast abroad the shining seed,
And build the wealthy mow;
They bear the bread our children eat;
'Tis by their toil we live:
Hurrah! give them the loudest cheer
That grateful hearts can give!

—[Chambers' Journal.

Does It Pay?

Does it pay to have fifty workingmen poor and ragged, in order to have one saloon-keeper dressed in broadcloth and flush of money?

Does it pay to have one citizen in the county jail because another sells him liquor?

Does it pay to hang one man because another got him drunk?

Does it pay to have a dozen intelligent young men turned into thieves and vagabonds that one man may get a living by "selling them rum?"

Does it pay to receive $15 for a rum license, and then pay $20,000 for trying a man for murder, induced by the rum sold him?

Does it pay to have a thousand homes blasted, ruined, defiled, turned into hells of misery, strife, and want, that some wholesale rumseller may build up a large fortune?

Does it pay to have twenty mothers and their children dress in rags, live in hovels, daily famish, that one sumseller's wife may live in ease and affluence?

Does it pay to have hundreds of thousands of men and women in almshouses, penitentiaries, and hospitals, and thousands more in the asylum for the idiotic and insane, that a few heavy capitalists of the whisky ring may profit by such atrocity?

Does it pay to tolerate a traffic which breeds crime, poverty, agony, idleness, shame and death wherever it is allowed?

NO!

TALL GRAIN.—Thomas A. Shaw, of San Jose, writes this story of tall grain: I have harvested a bundle of rye from William H. Hall's ranch, two miles from Santa Clara, nine feet high, and started it for the Centennial. It beats anything in grain that I ever saw or heard tell of, by a good deal. Measure off a nine-foot pole and take a look at it. Hall has 100 acres. Of course the yield will not average as high, but it is all simply immense. Paper mills are offering $9 per ton for the straw, after it is threshed, and good hay is only worth $10 to $11. Hall will thresh it and sell the straw.

OUR VALLEY.—Gardner B. Weeks, in his correspondence to the *Country Gentleman*, thus speaks of our valley:—Santa Clara valley was arrayed in all the pomp of spring magnificence when I was there, and the prospect for the abundant fruit crop was most flattering. I was told of one man at San Jose who last year sold 54 tons of cherries, plums, prunes and apricots, from six acres of land; of another who is now getting $100 an acre yearly rent for land, which originally cost him less than that sum, but which he wisely stocked with fruit trees only a few years ago. The daily shipment of strawberries from San Jose, in the height of the season, is frequently 90 tons. Although the amount of fruit raised in that is enormous, and is increasing yearly, yet there seems no present prospect that the business will become unremunerative. A canning establishment, started in a small way, has been repeatedly enlarged—a process now being again repeated. To men with some capital and a liking for fruit-raising, it appears to me that Santa Clara valley offers inducements beyond any other part of this State. San Jose is a handsome and tolerably busy city, of about 16,000 inhabitants, and it has church, school, library and other facilities and advantages, equal to eastern cities of like size.

SENDING PRAYERS IN A CART.—MR. Spurgeon tells the following story: "A poor man who had a large family gave them a very comfortable support while he was in health. He broke his leg, and was laid up for some weeks. As he would be for some time destitute of the means of grace, it was proposed to hold a prayer meeting at his house. The meeting was led by Deacon Brown. A loud knock at the door interrupted the service. A tall, lank, blue-frocked youngster stood at the door with an ox-goad in his hand, and asked to see Deacon Brown. 'Father could not come to this meeting,' he said, 'but he sent his prayers, and they are out in the cart.' They were brought in, in the shape of potatoes, beef, pork and corn. The meeting broke up without the benediction. Nor did the poor fellow suffer during his whole confinement. The substantial prayers of the doner became means of grace."

THE CALIFORNIA AGRICULTURIST AND LIVE STOCK JOURNAL, for May, is at hand. As usual, it contains a large amount and variety of matter of peculiar interest to the farmer, gardener, and stock-raiser, and is always worth twice the amount of subscription price, which is only $1.50 a year. "California Agricultural Publishing Company," San Jose.—*Alameda Encinal, May* 13.

Whenever a person takes a country paper to get information concerning the region it advocates, and finds from ten to twenty saloons or dend-falls advertized and puffed in every issue, it don't take long for such, if the welfare of the family is any inducement to settlement, to conclude that no amount of good land or climate will compensate for these.—*Lompoc Record.*

A journal devoted to the cause of women, proposes that a Magdalen asylum be opened for depraved men, where they would live under ban, be poorly fed, and after a certain time, if signs of reformation appeared, placed in families, always, however, hearing about the brand of their degradation, as a wholesome and just punishment.

The farmer who keeps everything about the premises tidy, all the animals in a comfortable condition, who has plenty for his family's support, is out of debt, (or whose affairs are in a prosperous condition), is at peace with his neighbors, takes the papers, buys good books, is truly nature's nobleman, and can truthfully say: "I am monarch of all I survey; my rights none dare dispute." Such a one the king on his throne may well envy, and the merchant, or professional man is naught when compared with this.

Lake Tahoe.

BY SARAH E. CARMICHEL.

Lake Tahoe, sweetest lake of lakes!
The vision of thy beauty breaks
With starting power upon the eyes,
A sheen of water gleaming high
Above the tall, dark-pointed pines;
Apparently thy wave inclines
Toward the sun, who pauses there
To dress his long, bright amber hair;
And many a loose, thick, shining tress
Twines round thee in a warm caress;
Nor does thy bosom's picture slight
His most impassioned glance of light.
The day, whose smile thy mirror takes,
Hath named thee sweetest lake of lakes!

Lake Tahoe, sweetest lake of lakes!
The cresting foam oft overtakes
And tramples on the soft, white feet
Of day, unwilling to retreat
From the deep tide that charms its sense
By a heart-worship so intense.
Oh, pale amethyst gem that shines,
Clasping the leafy crown that twines
The proud Sierra's cold, pure brow,
Shine on, forever, fair as now!
Glow, many-tinted water, glow!
There is no brighter wave below.
The night, that mornfully forsakes,
Hath named then sweetest lake of lakes!

Lake Tahoe, sweetest lake of lakes!
A thought of awe intense awakes
Within the soul that lingers where
Thy tranquil bosom slumbers fair,
Like a bright tear of pitying love
Wept warm from heavens that lean above,
When the full starry dome is seen to see
How lovely this hushed world can be,
And view, with tranced and wondering eyes,
Thee, looking upward to the skies,
So beautiful, they half forget
That earth is not an Eden yet.
I, in whose dreams thy beauty wakes,
Have named thee sweetest lake of lakes!

FOR CONSUMPTIVES!

And others suffering from

CHRONIC DISEASES

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LAKE TAHOE.

SUFFERERS FROM ASTHMA, BRONCHITIS, Consumption, all Lung Diseases and all Chronic Diseases, are informed that DR. BOURNE has devoted more than Two Years to a careful study of the meteorological phenomena of Lake Tahoe, with special reference to its climatic value for sufferers from lung diseases. His experience satisfies him that it probably is, from its altitude and peculiar surroundings, UNEQUALED by any other known region on earth for its climatic aid in such diseases.

Without Medicines, Dr. Bourne effects cures in cases considered hopeless under other modes of treatment; his method being peculiar to himself, and the result of an experience as a Water-Cure Physician during more than a third of a century.

It is Dr. Bourne's effort to make quick cures in all cases, and he always designs to be, and is, eminently successful; but upon no condition will he accept a patient who entertains the absurd opinion that "sick people must not eat."

☞ Cures in Dyspepsia Guaranteed.

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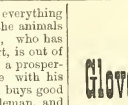

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This reform underclothing has been worn by the Editor's wife and children for the past two seasons, and is certainly superior in points of comfort, healthfulness, and economy of wear and material of any ever invented. It is the invention of a California lady who makes every pattern herself and writes full directions upon each. No family that once tries this style of clothing will ever go back to the others.

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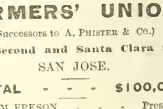

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JAMES VINCENT MILLER,
Principal of the Business College.

1776 **CENTENNIAL** 1876

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Parties desiring to purchase Live Stock will find in this Directory the names of some of the most reliable Breeders.

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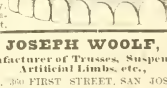

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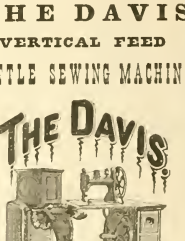

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AGRICULTURIST AND LIVE STOCK JOURNAL

A HOUSEHOLD MAGAZINE.

A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

AUGUST.

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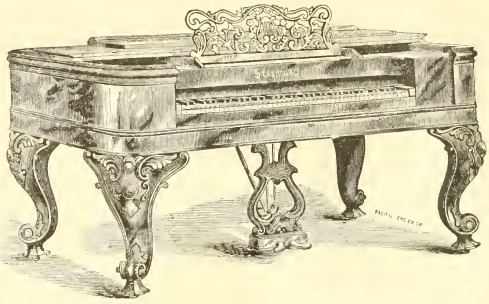

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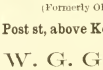

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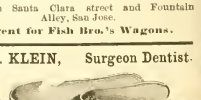


The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 7--No. 8. | SAN JOSE, CAL., AUGUST, 1876. | SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

SAN JOSE FURNITURE MANUFACTORY.

Among the leading manufacturing enterprises on this Coast, and deserving of the success with which it has met, is the San Jose Furniture Manufactory. The Company, of which Mr. J. S. Bennett is the present head, was organized in August, 1874, only two years ago this month. Mr. Bennett, who is a thorough mechanic and hard-working business man, and who had been engaged in the practical work of furniture business for twenty years in the East, brought with him to this Coast the latest and most improved machinery for the manufacture of furniture. The first year this was put up in the building occupied by the planing mill on Fourth and San Fernando streets. The greatest difficulty in the start was experienced in obtaining skilled and reliable workmen, although the competition combined to break the enterprise down was only conquered by hard work and constant attention to the details of business. We have seen Mr. Bennett with one hand in a sling from being disabled in the machinery, doing the work of two workmen, besides superintending the business. Such indefatigable pluck and enterprise can but win, even against strong opposition.

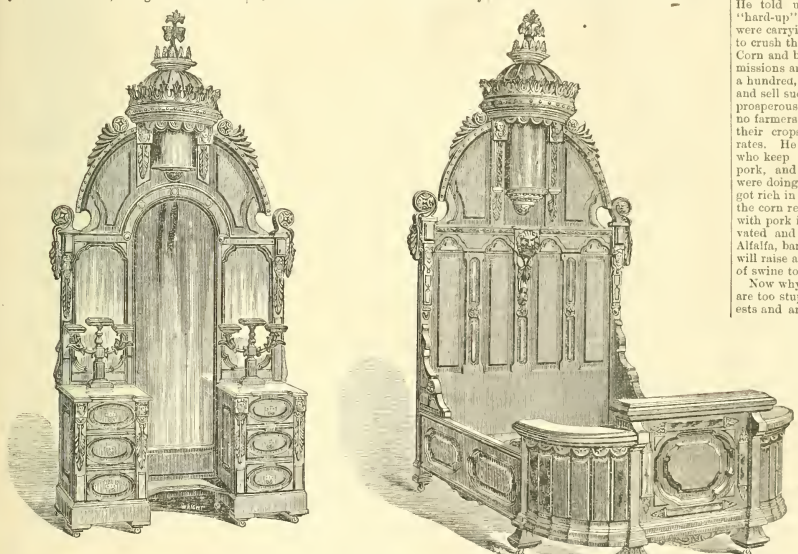
The factory, with still more and newer machinery, is now located on St. John street, between First and Market streets, and consists of two stories—engine and machinery below, and workshop above. All work is done by machinery except "setting up." The warehouse, upholstery department and furnishing rooms occupy a large building erected for the purpose and located on First street, embracing Nos. 224 and 226.

The firm employs from 20 to 30 hands. The amount of furniture turned out by this manufactory, from the raw material, is perfectly astonishing, while the quality of their work will compare favorably with the best made in any Eastern manufactory.

The elegant chamber set—the bedstead and dressing case bureau—here illustrated will give the reader some idea of the elegance of the work turned out at this establishment. This set was designed and made by the San Jose Furniniture Manufacturing Company. It was on exhibition last fall at the Santa Clara Valley Agricultural Fair, where, of course, it took a premium over everything else. It has since been purchased, and is now owned by Dr. Spencer, of this city, for his fine new residence on Third street. Several kinds of wood, including California laurel, are used in its construction.

By the way, the experiments of Mr. Bennett with various kinds of California timber, if written out, would be valuable. He finds that but few kinds of wood on this Coast are well suited to furniture making. The finer woods are only fit as veneering, as they warp and check badly used singly. Redwood is not fit for furniture. It splits and splinters easily, and shrinks badly. The Oregon cedar is a wood that neither warps nor splits, and is used largely as a foundation in cheap, substantial furniture. But the black walnut is the principal wood used, after all. Mr. Bennett hopes to see the time when the Eastern trees will be cultivated on this Coast extensively. As the various kinds of trees now cultivated become of size for use, he designs giving them a trial.

The sales department of this establishment is conducted by Mr. A. G. Bennett, brother of the manager, who has had many years' experience in the furniture business in New York and the Eastern States.



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Altogether, this manufactory is a credit to San Jose and to California, and has proved to be not only a success as a business, but a convenience to old settlers and new-comers alike who desire good articles of furniture at reasonable figures.

FARMING VS. PLODDING.

We were lately talking with a farmer from Southern California about the prosperity of farmers generally in that section, and particularly about the farmers in the best corn growing districts. He told us that they were generally "hard-up" for money. Many of them were carrying mortgages that were bound to crush them with increasing interest. Corn and barley, after freights and commissions are out, average about 75 cents a hundred, and those who work hard and sell such crops are not in any sense prosperous. We inquired if there were no farmers who keep stock and feed their crops instead of selling at such rates. He replied that there are a few who keep hogs and other stock, make pork, and that, *without exception*, they were doing well and several had already got rich in the business. He said that the corn regions could supply California with pork if the land was properly cultivated and the crops used in this way. Alfalfa, barley and corn upon such soil will raise and feed an immense number of swine to the hundred acres.

Now why is it that so many farmers are too stupid to study their own interests and are contented to slave away at the hardest kind of work year after year without making anything but a poor living, and often less than that, when by adopting the right system, and intelligently working to make the best of their opportunities, they could soon be independent and have everything they want. Our ALL-WHEAT farmers belong to this same stupid class. They seem willing slaves to a thoughtless drudgery that keeps them poor. Few such men take or read agricultural papers. They "know too much about farming now," to take their own word for it. The fact is, they don't understand the first principles of farming, not one in fifty of them, if they did, they would be likely to practice something better than the one-crop system. They would go to *farming*.

What constitutes a State?
Not high-raised battlements or labor'd mound,
Thick wall or moated gate;
Not cities proud, with spires and turrets crowned;
Not bays and broad-armed ports,
Where, laughing at the storm, rich navies ride;
Not starr'd and spangled courts,
Where low-brown baseness wafts perfume to pride.
No; Men! high-minded Men!
Men who their duties know;
But know their RIGHTS, and, knowing, DARE MAINTAIN!

—[Selected.

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S. HARRIS HERRING, Editor.

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☞ We are determined to adhere to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.]

EDITORIAL NOTES.

The Santa Clara Valley Agricultural Society will open its annual fair the first Monday in October, to continue during the week—from the 2d to the 7th inclusive.

Our Domestic Department is not filled this month. Evidently our practical housekeeping correspondents are too much wilted by the hot term and hurry of harvest, in the kitchen, to talk or write much about it. We shall expect them to make up next time.

Contesting License.—The merchants of San Jose have commenced to agitate the question of contesting the constitutionality of the merchandise license tax. Why do not the fruit and vegetable producers about San Jose test the ordinance that prohibits farmers from peddling their own products without first taking out a license? Has not a man in this free country a right to dispose of his productions wherever he pleases, so long as he does not trespass upon private property? In our opinion, the license upon retailing farm products is not only an outrage upon American freemen, but upon the constitution of the United States. One that should not be tolerated by sensible men, nor endured by producers. If the city needs revenue let them raise it in a decent manner, by direct tax upon persons and property. The retail shop dealers claim that such a tax is "necessary for their protection." They ought not to be protected in such extortion as they constantly practice, and if they cannot make a living on an equal footing at their business, let them go at something else. This is, or ought to be, a free country.

Every season we find it necessary to complain about the wasteful practice of burning straw or allowing it to rot after the thresher in the field. No farmer has a right to thus destroy a valuable production. What would you think of a man that would burn his hay? Yet straw is at least one-third as valuable for stock feed. There would be none too much straw for the stock this State should keep, if it was all saved. If there is, why do so many thousand head go hungry, and even starve, every winter?

Live stock breeding, and the raising and fattening of stock for market, is altogether the most profitable branch of farming. No farm will run down under a proper system of stock raising in connection with cropping. The farmer who raises good stock, utilizes the heavy products in feeding and fattening, and markets at the proper age and condition, is on the up grade of prosperity, unless there is something radically wrong in some other management to over-balance the good. The perfect farm is well stocked, yields large annual crops, and grows richer instead of poorer every year.

Making and Saving.—It is easier for many persons to make money, or in other words to accumulate property, than to keep it. Saving does not always mean hoarding. The farmer saves his earnings who properly invests them in farm improvements—improvements of real utility as well as real comfort. To make every day's work and every calculation about work tell, is the main object, so far as getting is concerned. To properly use the means acquired so as to receive, in material and progressive benefits, the utmost use, and aid in further efforts to acquire, is, in our opinion, the true way of saving. Never spend a dollar foolishly, nor to gratify a bad habit

Annual Loss, $15.000,000!—This may look like a small sum to lose every year by the wear and tear of silver coin in handling, but it is probably a correct estimate, predicated upon the actual loss in weight. The loss in gold is proportionally as large, or larger. The wear, or loss on paper is nothing at all compared with these figures. Values are just as surely and reliably represented by pledges founded upon the honor of the Nation and wealth of the people, as by gold, silver, copper, iron, tin, or any other metal. The first cost of paper is but trifling, and it will do equal service with greater convenience and much less loss.

Machinery and brains are ruling the world of industry to-day. Mere brute force is at a discount. It needs a guiding power, a controling and directing energy to become valuable. Labor is ennobled only by brains. The laboring man who works for himself, and thinks, plans, calculates and aims at excellence in all he does, can succeed as well to-day, single-handed as ever before only when his efforts are made in the right direction. A laborer needs something more than a sickle to compete with a harvesting machine—something different from a mattock to compete with a plow. But there are channels of industry open to all. While the larger machine narrows the use of the smaller, it does not close any avenue of industry. As the world advances new avenues are opened. Surely if MAN stands supreme, MAN must lose no value or prestige as man, but rather be the gainer, and count all the more in the scale of worth. Let intelligent co-operation supersede monopoly, and manual labor will seek its true level at the top of society.

Ask Questions.—If you do not find the subject treated upon in your paper that you are interested in or would like to gain information upon, ask questions. The Editor is never more pleased than to answer inquiries, or submit them to others. It makes a journal interesting to all, to each month show an array of questions and answers, such as are generally or specially interesting to many readers. Ask questions upon whatever pertains to your calling, and see whether the AGRICULTURIST is practical enough to give, or elicit, an intelligent answer.

The Indian question is again agitating the public, as the brave Custer's fate is talked about. There are two sides to the question. Undoubtedly the trouble mainly arises from the white man's breaking faith with them. But there are two kinds of Indians, viz.: the tribes inclined to peace and the thieving, murderous tribes. The former are seldom troublesome. They soon take up with civilized ways and the simple arts of peace. The latter are never at rest in peace, and in war are remorseless in the extreme. Their only virtues are treachery and destructiveness. The warring tribes have from time immemorial been the terror of the peacable tribes, and can never be tamed into decent persons. Their nature, like the rattlesnake's, is to kill. They want to be prowling, stealing and committing depredations continually, either upon good tribes of Indians or upon white men. Two years' experience in the Apache and Navajo countries, where the peaceable Pimos, Papagos, Zunis and Pueblos dwell, and where the devilish Apache, Navajo and Comanche tribes were continually at war with them, and with us, plainly showed to us the distinction between good and bad tribes of Indians. While we believe in treating all Indians as well as possible, and advocate allowing the good tribes lands and even citizenship, we believe the mean, murderous tribes are entitled to no confidence, and the sooner they are exterminated the better for the rest of mankind.

How much better than a thief is a man who takes advantage of confidence to defraud another? Is he not even meaner than a thief? The thief asks no confidence, but takes from you, most likely, behind your back. You may be materially injured by the thief, but not morally outraged, as by the confidence man. Now, we wish to make direct application to such persons as take a paper year after year with the intention of not paying for the same, and who finally discontinue without paying for what they receive. We can afford to say that we think such persons meaner than sneak thieves. We have been defrauded in this way by many persons, too. Now, if there are any more such persons on our list, they may make personal application of this, get mad, and stop at once—take these remarks as an excuse for stopping their paper without paying before it runs any longer. It costs money to run this journal, and we cannot afford to be imposed upon. We are perfectly willing to send the AGRICULTURIST without pay in advance where the subscriber is accomodated by our so doing. It may not always be convenient to pay for a paper when the year is up. We are willing to trust. We are also willing to send the paper free for a time, on trial, and like to do so, so as to introduce it to new readers. What we complain of is, the deliberate meanness of the confidence class, who are too contemptibly mean to pay what they owe on a paper that they have for a long time received.

It will pay to read the new advertisements on the second page of cover.

There is a prospect that Congress will soon do something, one way or the other, with the Chinese question. A committee has been appointed to visit this Coast to inquire into the matter and report. We hope the immigration of Chinese to this country will be effectually checked.

The Wheat Question.—As we go to press the Grangers, some one hundred and twenty representatives, are in session in San Francisco for the purposes of discussing the wheat problem, and to protect their own interests. With what result we do not yet know. There seems a general disposition among the farmers of this State to hold on a while for better prices. The fruit-growers are also in session.

Comparative Value of Peas.—The following report from Mr. H. Curtner, of Harrisburg, Alameda county, who cultivates over a hundred acres of peas for market each season, will be of interest to some readers:

EDS. AGRICULTURIST: Agreeable to promise, I now report to you the result of trial of a lot of peas obtained through you from the Agricultural Department, Washington, D. C. The Dwarf Branching variety is very late and useless as a market pea in this climate. The Dwarf Blue Imperial grew well, but is too late, and not so sweet as the Champion of England, which we have found, from some years' experience, to be our best pea. The Caxton Alpha is very early, but the plant is weak. It is a shy bearer, and consequently unprofitable. H. CURTNER.

Kindness to animals is a sentiment that is grounded deeply in the conscientious nature of man. Education may develop this sentiment, and abuse may render it obtuse, but the really good person feels a spontaneous affection and regard for the animals that are placed within his power, especially for such as are subdued by kindness to man's servitude. The article which appeared in our June number, "Brute Animals Compared with Man," by our friend Dr. Chittenden, has been read with profit by many. In this issue, "Our Poor Relations," by friend Ingraham, will be found very deep in thought and instruction. Aside from the nobility of character shown by kindness to animals, and the conscious enjoyment to both man and beast, who are mutually benefitted by every kind act, there is profit—pecuniary profit—in being kind and considerate of the wants and needs of such stock as are useful to labor and as have a marketable value.

In order to supply the increasing demand, owing to our enlarged list of names, we are now publishing 3,500 copies of the CALIFORNIA AGRICULTURIST. This is 500 more than we started the present volume with. We expect, and intend, to increase it 500 more before January, 1877. It circulates in every county in this State, and in all agricultural districts in Nevada, as well as generally over the Coast. The paper has not less than 10,000 readers, as the copies are seldom destroyed, and are very generally sent abroad to friends, after families taking are through reading them. Not only is the typographical appearance of the AGRICULTURIST elegant, but its contents is largely original. It contains no objectional advertising or puffing, and it aims to truly represent the honest features of its locality, of its State, and of the Pacific Coast. The AGRICULTURIST is every where respected, and for appreciation we leave it upon its own merits alone.

Poetry.

The Little Black-Eyed Rebel.

BY WILL CARLETON.

A BOY drove into the city, his wagon loaded down
With all to feed the people of the British-governed town;
And the little black-eyed rebel,so cunning and so sly,
Was watching for his coming from the corner of her eye.

His face looked broad and honest, his hands were brown and tough,
The clothes he wore upon him were homespun, coarse and rough;
But one there was who watched him, who long time lingered nigh,
And cast at him sweet glances from the corner of her eye.

He drove up to the market, he waited in the line—
His apples and potatoes were fresh and fair and fine;
But long and long he waited, and no one came to buy,
Save the little black-eyed rebel, watching from the corner of her eye.

'Now who will buy my apples?" he shouted, long and loud;
And "Who wants my potatoes?" he repeated to the crowd;
But from all the people round him came no word of a reply,
Save the black-eyed rebel, answering from the corner of her eye.

For she knew that neath the lining of the coat he wore that day
Were long letters from the husband and the fathers far away,
Who were fighting for the freedom that they meant to gain or die;
And a tear like silver glistened in the corner of her eye.

But the treasures—how to get them? crept the question through her mind,
Since keen enemies were watching for what prizes they might find;
And she paused a while and pondered, with a pretty little sigh;
Then resolve crept through her features, and a shrewdness fired her eye.

So she resolutely walked up to the wagon old and red;
"May I have a dozen apples for a kiss?" she sweetly said.
And then the brown face flushed to scarlet, for the boy was somewhat shy,
And he saw her laughing at him from the corner of her eye.

"You may have them all for nothing, and more, if you want," quoth he.
"I will have them, my good fellow, but can pay for them," said she;
And she clambered on the wagon, minding not who all were by,
With a laugh of reckless romping in the corner of her eye.

Clinging round his brawny neck, she clasped her fingers white and small,
And then whispered "Quick, the letters! thrust them underneath my shawl.
Carry back again this package, and be sure that you are spry!"
And she sweetly smiled upon him from the corner of her eye.

Loud the motley crowd were laughing at the strange, ungainish freak,
And the boy was scared and panting, and so flushed he could not speak;
And, "Miss, I have good apples," a bolder lad did cry;
But she answered, "No, I thank you," from the corner of her eye.

With the news of loved ones absent to the dear friends they would greet,
Searching them who lingered for them, swift she glided through the street.
"There is nothing worth the doing that it does not pay to try."
Thought the little black-eyed rebel, with a twinkle in her eye.

"*A Friend in Need,*" etc.—Reliability and fair dealing are virtues in business which can be appreciated in no case more than when the services of an undertaker are needed. Messrs. Trueman & Woodrow, of this city, have earned the reputation for straight forward and honorable dealing in every detail that makes them hosts of friends. They are often charitable, but never exhorbitant.

Prophecy of the Future Glory of America.

The following prophetic poem, by an anonymous contributor, was published in some of the colonial journals prior to the Declaration of Independence in 1776:

To years far distant, and to scenes more bright,
Along the vale of time extend thy sight,
Where the the hours and days and years from you bright pole,
Wave following wave, in long successions roll;
There see in pomp, for ages without end,
The glories of the Western World ascend!

See, this blest land in her brightest morn appears,
Wak'd from dead slumbers of six thousand years
While clouds of darkness veil'd each cheering ray,
To savage beasts and savage men a prey.
Fair Freedom now her ensign bright displays,
And peace and plenty bless the golden days.

In mighty pomp America shall rise,
Her glories spreading to the boundless skies;
Of ev'ry fair, she boasts th' assembled charms,
The queen of empires and the nurse of arms.
See where her heroes mark their glorious way,
Arm'd for the fight and blazing on the day.

Blood stains their steps; and o'er the conquering plain,
'Mid fighting thousands, and 'mid thousands slain,
Their eager swords promiscuous carnage blend,
And ghastly deaths their raging course attend,
Her mighty power thro' subject world shall see,
For hatred conquest waits her high decree.

See her bold vessels rushing to the main,
Catch the swift gales, and sweep the wat'ry plain;
Or led by commerce, at the merchant's door,
Unlade the treasures of each distant shore;
Or armed with thunder, on the guilty foe
Rush big with death and aim the impending blow;
Bid every realm that bears the trump of fame
Quake at the distant terror of her name!

A Russian Fable.

BY LAURA SANFORD.

One day a farmer in his field
Was sowing oats for autumn yield.

A young horse watched him on his way,
And gave at once a scornful neigh.

"How foolish man is!" this colt thought;
"Here in the very act he's caught

"Of throwing oats upon the ground;
Could any rasher waste be found?

"Give me that heap, and I would show
What oats are good for—for I know.

"Or even give them to the crows,
They have more sense than this act shows!

"Or hoard them carefully away.
Man may want oats some future day!"

Well, time passed on. The autumn grain
Was garnered from the field again.

The farmer gathered oats tenfold,
And gave the horse all he could hold.

Are we not sometimes like this colt?
We send a criticising bolt

'Gainst higher powers. We call waste
What is but wisdom, viewed in haste.

We mock the providence that sends
Its aim through darkness to kind ends.

The Rain Drops.

A farmer had a field of corn of rather large extent,
In tending which, with anxious care, much anxious toil he spent;
But after working hard and long, he saw with grief and pain,
His corn began to droop and fade because it wanted rain.

So sad and restless was his mind, at home he could not stop,
But to his fields repaired each day to view his withering crop.
One day he looked up despairing, at the sky,
Two little rain drops in the clouds his sad face chanced to spy.

"I feel so grieved and vexed," said one, "to see him look so sad,
I wish I could do him some good, indeed I should be so glad,
Just see the trouble he has had, and if it should not rain,
Why, all his toil, and time, and care he will have spent in vain,"

"What use are you," cried number two, "to water so much ground?
Your are nothing but a rain drop, and could not wet a mound."
"What you have said," his friend replied, "I know is very true,
But I'm resolved to do my best, and more I cannot do.

"I'll try and cheer his heart a bit, so now I'm off: here goes!"
And down the little rain drop fell upon the farmer's nose.
"Whatever's that?" the farmer cried; "was it a drop of rain?
I do believe it's come at last; I have not watched in vain!"

Fow, when the little rain drop saw his willing friend depart,
Said he, "I'll go as well and try and cheer the farmer's heart."
But many rain drops by this time had been attracted out
To see and hear what their two friends were talking so about.

"We'll go as well," a number cried; "as our two friends have gone,
We shall not only cheer his heart, but water, too, his corn.
We're off, We're off!" they shout with glee, and down they fell so fast,
"Oh, thank the Lord!" the farmer cried; "the rain has come at last."

A Hundred Years.

BY F. J. WALKER.

A hundred years—it seemeth long
To us, the children of to-day—
We tell the tale and sing the song
Of olden time, so far away.

We sing of those heroic ones
Who spurned the shackles of a throne,
And grim behind the rolling guns,
Proclaimed that freedom was their own.

Speak out, ye cannon, now once more,
Behold to-day the whole earth hears
Thy voice—speak louder than before
The old truth of a hundred years.

The story of that ancient bell,
How lightly, joyfully it swung;
Indeed, it was oppression's knell,
And birth of liberty it rung.

Ring out' ye freedom-bells, again,
Your voice is welcome to our ears—
The key-note that ye sounded then
Has echoed through a thousand years.

Their battles-flags are folded now,
The sword is rusting on the wall,
The clod is on the soldier's brow,
But this is not the end of all;

For yonder flag with crimson bars—
How glorious its joy appears—
Flasots forth this triumph of your stars,
The freedom of a hundred years.

The freedom of a hundred years
They gave—oh, patriots sublime,
The harvest of your toil and tears
Shall ripen to the end of time.

Our Country Lives.

BY SOLON ROBINSON.

A hundred years! a century dead?
A hundred years with banners spread,
Our country lived, lives!
And gains by what it gives;
Grows young though growing old;
Grows strong on what it grows;
Though stalwart now, still growing tall,
From fat'ned wealth which overflows,
From golden mines the farmer finds in every soil.

A hundred years, while growing old;
A hundred States, may they untold;
And banners wave, wave
O'er States which Freedom gave
To form a Union strong;
And stronger grown by years,
Until Centeunial days shall be
Millennial too, in spite of fears,
That through some fatal, in several States, we yet might be.

A hundred years our flag has waved;
"Our Country," now on banners graved,
Our County still, still
As one in one good will,
Still every part as one
Joins hearts, and hands, and lives;
Lives now as through past years,
And every wrong of each forgives.
Through love of old and not through fears:
And that is why we cannot die—Our Country lives!

City Gardening.

Flowers.

The beautiful flowers, the beautiful flowers,
They've a mission pure in this world of ours:
They minister gently of hope and love,
They teach our spirits to look above,
And we gaze on them till our thoughts arise
To the glorious bowers of paradise.

Our garden is only a wee bit spot,
In front of our humble snow-white cot,
And the haughty florist might pass it by
As unworthy a glance from his practiced eye;
But dearer to me than regal bowers
To a monarch's heart, are our simple flowers.

We have gorgeous tulips of gold and jet,
And gaudy scarlet, in borders set,
We have gay carnations of brilliant hue,
And the beautiful moss rose gemmed with dew,
And we look on them with admiring pride—
But our love is for those on the other side.

There the delicate snow drop lifts its head,
And the violet peeps from its lowly bed;
And the breath of the lily, the pride of the vale,
Is floating sweet on the balmy gale;
While around our door the green ivy clings,
And the fragrant clematis its odor flings.

Dearly I love the sweet fragrant flowers,
They've cheered and gladdened my lonely hours,
And many a lesson they bear to me
Of holiness, meekness and purity.
Oh, dreary and sad were this world of ours
If God had withheld the bright, beautiful flowers!

TRIMMING PLANTS WHILE GROWING.

EVERY one admires a beautiful form in a plant, an evenness of growth of the various branches to give a fine balance to it. There are some plants whose habits are naturally straggly and uncouth. While they are growing a little nipping back of the leading branches with the fingers, or with a pair of shears, will hold them in check while other branches will be encouraged to grow to the same size. We will cite, for instance, the Lemon Verbena. This seldom mades a sightly shrub when left to itself, although it is a favorite owing to its sweet scent and deliciate green. By pruning back the leading branches, it will soon grow into a well-rounded and closely furnished bush. If you wish it to grow tree-shaped, encourage it to grow tall by nipping back the ends of side limbs till it has acquired the right hight; then, to prevent it growing one-sided and to make it well-formed, nip back all shoots which are out of balance. This same system can be applied to roses geraniums, and in fact to any plants that are desired to grow into better shape. It is not at all necessary to cut branches off close to the stalk, in fact it is better not to do so. But a little nipping back of the ends of growing shoots is all that is required.

MADEIRA VINES IN-DOORS.

A San Jose lady is cultivating the Madeira vine in-doors. She has some growing in pots upon the parlor mantle. The vines are wreathed over and about the frames of pictures upon the white walls, and are as delicately beautiful as anything we ever saw. Out of doors, the Madeira vine grows vigorously and produces a heavy, dense foliage. In-doors, the vines are slender, the leaves fine in texture and tender green, and really our ideal of perfection. We had to ask what it was, so different did it look from the Madeira vine which twined over the trellises of the piazza in front of the cottage. We are sure that any lady who will try it, will be thankful for the information. You can procure the tubers that cluster about the base of Madeira vines as they grow out of doors, and

plant them in pots containing sand, enriched with a little fine stable manure, well mixed together. Keep the soil well moistened in a warm place until the vines start, the put wherever you wish the vines to climb, and with proper care the growth will soon delight and astonish you. The English ivy is often seen growing in bottles of water hung up behind picture frames. It is very pretty. The Wandering Jew is also grown in the same manner. But while these latter plants are fine ornaments, the Madeira vine is, for delicacy and beauty, as far ahead of them as you can well imagine.

We are assured that many of our lady readers are much pleased with the "City Gardening" department. We think they would be much better pleased if each reader would contribute some little fact gleaned from her own experience in cultivating plants, and also ask for information about any particular plant or manner of cultivating that she would like to know more about. We want each one to feel enough interest to contribute to this department.

Fern Culture in the Parlor.—The following, from the *Country Gentleman*, is splendid advice to follow:

Ferns are plants the culture of which is very interesting, either in the greenhouse or the parlor. Nothing adorns a sitting-room more than a case of ferns in luxuriant health. A case for this purpose may be made of any size, and almost any shape. In their construction, however, several particular points have to be borne in mind, for the best benefit of the plants which are to grow in them, the first of which is a means of obtaining *a thorough drainage*. More failures occur in the cultivation of plants in Wardian cases, from imperfect drainage, than from any other cause, nothing being more injurious to the plants than sour, stagnant soil; and however porous the soil itself may be, without perfect drainage it cannot be long in a condition suitable for supplying a healthy food for plants; the water retained in the soil having no means of escape, sours it. To secure good drainage, also dryness and tidiness in that part of the room where the case stands, two bottoms are necessary; one, the true bottom, which should be thoroughly perforated to allow the free escape of the water; below this one, another should be placed to receive the water as it passes from the soil, and therefore requires to be water-tight, and so adjusted that it can be emptied and cleaned without disturbing any other part of the case. On the upper bottom place a good thick layer of pot-shreds and charcoal for drainage. Upon this put a small mound of suitable soil for ferns—peat, loam and a good mixture of sand—secure in this mound small stones and shells, so as to imitate a small rock work, allowing sufficient cavities for planting ferns and mosses.

Proper means of ventilation is also necessary, which is best acquired by having part of the roof movable. When so constructed that the movable part can slide over the fixed part, it gives the least trouble, and is the most convenient when cleaning, watering or planting the ferns. Top ventilation is better for the welfare of the plants than when side ventilation is adopted, as then there can be no ill effects arising from cold draughts passing through them.

When planting the ferns, put some erect growing kinds at the top, and the more dwarf and bushy ones on the sides of the mound, using moss for carpeting the whole. Upon removing the plants from the pots, do not break up the balls any before planting; the roots will soon make a start in the fresh soil, which should be pressed rather firmly around the roots. After the plants are in, give a good watering, and shut close for a few days.

In selecting plants for such purposes, dwarf-grown plants, in small pots, are the best.

Pretty Arrangement of Plants in Pots.—Among the prettiest things we ever seen in the London flower market, says the *Garden*, are small pots containing growing plants of forced Lilies of the Valley, and a few fine crimson Tulips, growing out of a healthy little tuft of the common Maiden-hair ferns.

The same journal, of January 1st, said among the most beautiful of all pot plants now brought to Covent Garden market is the lovely little Siberian Squill with drooping flowers of the clearest and most vivid blue color imaginable. Nothing could be psettier than pots of Lilies of the Valley and tender young ferns, neatly but not too regularly margined with this beautiful little Alpine bulb.

Ozone Generated by Plants and Flowers.—One of the most important of the late discoveries in chemistry is that *ozone* is generated in immense quantities by all plants and flowers possessing green leaves and aromatic odors as, for instance, Hyacinths, Hehotrope, Mint, Lavender and the like. So powerful is this great atmospheric purifier, says the *Sanitary Record*, that it is the belief of chemists that whole districts can be redeemed from the deadly malaria which infects them. by simply covering them with aromatic vegetation. Every little flower pot, therefore, is merely a thing of beauty while it lasts, but a direct and beneficial influence upon the health of the neighborhood in which it is found.

Beautiful Floral Ornament.—Take a soup-plate or a pickle-dish, and fill it with sand. Moisten the sand with water and heap it to a cone, and then thrust into the wet sand flowers and foliage enough to cover the whole surface, and you will have, if you arrange it well, the most beautiful floral ornament that can be imagined. This is an excellent way for arranging short-stemmed flowers, or those the petals of which are too soft to be tied without injury among stiffer ones. Or place in the centre of your soup-plate a tea-cup, a child's mug, or a wine-glass, in which insert a small bouquet, and then proceed as above. This will make a better cone than the first method.

Cheap and beautiful hanging baskets are made of round sticks, about one inch in diameter, eight inches in length at the bottom, increasing to fourteen at the top. In constructing, begin at the bottom and build up, log-cabin fashion; chink the openings with green moss, and line the whole basket with the same. They are easily kept moist, and the plants droop and twine over them very gracefully.—*Gardener's Monthly.*

Cheap Land, or Dear Victuals?—On the Overland train which arrived in San Francisco at six o'clock July 26, there was rn old man from the "Sucker State" on whose brows rested the snows of eighty winters, come to thaw them in our sunny clime and bathe his wrinkled visage in the gentle zephers of San Francisco. He seemed greatly disgusted with the country between here and Omaha and said that if anyone would give him a patent title for all the land he had seen on this side the Missouri River, in exchange for a meal of victuals, he would ask 12½ cents to boot!

A DAIRY HOUSE FOR HOT WEATHER.

Mr. Editor: As you are "suppose to know everything" in regard to farming, can you inform me how to build a cheap dairy house—one that will keep milk and butter cool in such weather as we have had for two weeks past?

Yours, W. A. T.

The above was received too late for our July number.

We can tell you how to make a good dairy so as to keep cool in hot weather, in fact, of even temperature during the year. This is a building entirely above ground, so as to secure perfect ventilation, boarded upon studding with matched or battened boards, inside and out, with roof also double, unless effectually shaded by trees. The floor should be above ground, and so arranged as to allow of a circulation of air between the floor and ground, through registers that may be closed in real hot days, or at will. Then, in connection with a wind-mill pump or other convenient apparatus, open troughs that can be supplied with fresh, cool well or spring water, in a slow, constant stream, at will, should be arranged about the room and milk shelves. Some dairies set the milk in pans or deep cans which are surrounded by this flowing water. A dairy room made upon this plan can be well ventilated even in very hot days, and still be kept cool by the water. The water evaporates, as it circulates through the room, sufficiently to cool the air admitted through screened windows necessary to sweetly ventilate the room. The best is generally the cheapest in the end.

A very cheap dairy on a small scale can be made by excavating, and making a room half above and half below ground, with ground floor, and roof either covered with earth or shaded by trees, boards, brush, etc. In this sort of a dairy but poor ventilation is generally given, and cleanliness seldom observed. Such a room may be well aired at night and on cool days, and by sanding the floor and cleaning up once a week, be kept in tolerably sweet condition. So long as nothing is allowed to get musty, and no rotten lumber is in walls or roof, such a cheap dairy may answer a very good temporary purpose, and is soon made by any one.

RETROSPECTION.

Farmers, at this season, when the crops are harvested, or being harvested, should take note of the same with an eye to improving upon all mistakes that have in any way been made this season. In what way could you have done better than you are doing this season? Did you plow just as you should have done, and put in crops during the right months? Did you procure the best seed and sow it just thick enough to produce the best crop? Would not that piece of land sown to wheat this season, which was very foul, have paid just as well devoted to hay and pasturage? Could you not have destroyed a crop of weeds, and prevented them from seeding the ground in this way, so as to get a cleaner crop of grain next season? Will it not pay to rotate from grain to pasturage and hay, and back to grain again, better than to sow grain on the same ground every season? Have you made as much, clear of expenses, as you think a good, prudent farmer should make, one year with another? If not, why not? Doubtless you will commence to think that you were not able to do any better, and in some way make personal exeuses. But, leaving self and all self-satisfied pride out of the question, looking at your affairs as an outsider would, how is it? Surely, if you are not either very fortunate or nearly perfect, there is some slight chance for improvement somewhere in your management, and it is a duty you owe yourself to ascertain in what direction, and to strive to do better next time; not to repeat the same mistakes, stupidly, from year to year. There are many branches of farming, and each locality, owing to conditions of soil, moisture, climate and surroundings, needs a little different management in some particulars, from others. You should study to know what system is best suited to your farm; what crops should preponderate; what kinds of stock, and how much, and in what proportion to keep, how to feed and market them to the best advantage, etc. Whatever your natural advantages or disadvantages, you should aim to make your farm a complete one, well balanced in every respect, with an eye to home comforts, conveniences, and farm profits. A sagacious man will profit by his mistakes by correcting them. A wise man will strive to profit by the success of others by adopting best methods. Only the self-conceited and ignorant man will think he knows it all, and be satisfied with hard work ill directed, when brains combined with muscle would make better progress with greater ease.

Farmers, study your own farms, your own business, and do not be contented without each year improving upon former ones in a manner to make your farm better, more profitable, more convenient, more fruitful, and your home in every respect a better and happier one.

DISEASED ORANGE TREES IN LOS ANGELES.

We have frequnetly read about a disease that is killing the orange and lemon trees in Los Angeles. Several newspapers have reported the cause to be an insect or fungus which causes the bark of the stalk near the ground to decay, with a slimy substance between the bark and the wood. We have lately had a talk with Mr. Eldred, an orange, a gentleman who has an orange orchard and who has made thorough observations. He declares that the cause of this trouble and loss of trees is from stagnant water about the roots. Too much irrigation of trees planted in heavy, ill-drained soil, at the season when trees need little water, is the cause of the whole trouble. We have read of trees dying in Louisiana from diseased roots, caused by too much water in the subsoil. These would first show signs of disease in the leaves near the top of the tree, and the fruit would crack open before ripe, finally the whole tree would die with slippery bark.

Too much irrigation upon heavy soil would certainly be likely to cause just such a disease as the Los Angeles orchardists complain of. In proof of his assertion, Mr. Eldred mentioned several orchards not irrigated, excepting once or twice in summer, that are entirely free from the bark disease. He says that there is nothing to be dreaded about this disease, and that it never has, and never will trouble trees that are not in too wet soil, or in soil kept too wet by irrigation. We trust that his premises are correct, as they seem plausible enough. We wait for further information.

To have the natural ability to perform an act without the moral ability, is no ability at all—is an absurdity. Without the *will*, there is no power.

OUR POOR RELATIONS.

BY D. G. INGRAHAM.

At this late day, in the nineteenth century, we are just beginning to feel some respect for the animal creation. Darwin has told us that we sprang from animals, and with some of us it was not much of a spring after all. Huxley evolves the human soul from a few drops of ammonia and carbonic acid, which, breathed upon by winds of oxygen, and shone upon by the electric rays of the sun, became in time a God-worshiping and man-loving being. The theologic school has told us that we were made out of the ground, and St. George Mivart has even conceded that the miraculous creation was simply the in-breathing of the soul of man after his body had been evolved by ages of development. Perhaps, after all, then, we are the children of dust and water. Our decent (or rather, ascent,) is traceable from such particles of dust as the coin we carry in our pockets, or the mud we scrape from our feet.

Look at the rocks that are one moment washed by salt waves and the next exposed to air and sunbeams, and you will see a little animal squatted on the rock and holding fast as if for dear life. You look him over and you find no eyes. You might look in vain for ears, or any of our senses. A careful examination will discover that of the five senses that we possess he has but one—the sense of feeling, and that rather blunted. He's a "poor relation." We are rich. Our faculties and senses open to us the universe of knowledge and feeling. He is poor. Satisfied if kindly Nature washes into his mouth the food that nourishes him and keeps him alive. We say, "poor relation," sure enough. "His poverty, however, is more evident than his relationship," some one will say. "Can it be possible that that miserable little jelly-bag has any kin to me who walks the earth *a man?*"

Yes, sir; it possesses *faculties* in common with you, and they are stronger links of evidence in the chain of proof than similarity of body or muscular structure would be. He possesses the faculty of enjoyment. That, alone, would show a common parent. God never made anything to be miserable. He, doubtless, made people and beings to be restless and unhappy at times that they might aspire to something better that was in store for them. More than that, our poor relation possesses the means of protecting himself, of showing his fears or his loves, of reproducing his kind, and last of all, *he lives*. That stamps him as the child of God. Of the eternal life which runs through all we see or know or feel he has a share. Though but an atom in the universe, "he counts one with God." Glued fast to the rock, he hears the common promise, "Be faithful over a few things, and I will make thee ruler over many things."

Never mind if our relations *are* poor. Let us not be ashamed of them. It is better to be the regenerate son of a chattering monkey than the degenerate son of a noble man. Better the going up than the going down. Perhaps we shall find our poor relations nearer perfect in their kind than we are in ours. It is quite natural that we should be self-satisfied. No doubt the animal and the vegetable have a certain satisfaction in themselves. The oak looks down in more senses than one on the scrubby rosebush; and the rosebush looks down on the violet. Just so does the Caucasian on the Mongolian and the African, forgetful that the sun shines for all, and that the rain and the dew are the gift of Nature to all. So our *poor* relations are only poor because *we* feel a certain proud satisfaction in ourselves. Poverty and riches are arbitrary terms. What is precious to Rothschild would be trash to a Feejee. It would be quite natural for an animal to think *his* kind THE kind, and *man* the "poor relation." Theodore Parker illustrates this in his "Convention of the Rumble-bees," and Pope in his "Essay on Man,"

"See all," says man, "created for my use;"
"See man for mine," replies the pampered goose.

But man seems now the creature whose turn it is to grow. Geologic ages have seen grasses and insects run their race, and give place to snakes and reptiles of gigantic frame. Ages were required to develop bone and muscle as well as the fruits and grains that sustain them. And now man comes in his turn to build up the brain. Examine the skeleton of a megatherium as it stands in our museums and you exclaim, "What bones!" If you could call back to those bones the flesh that once clothed them you would exclaim, "What muscles!" Now, examine, if you will, the skull of a Franklin or a Webster, and compare it with other skulls, and you cry out in astonishment, "What a brain in comparison to the body!" This is man's hour, and the age of brain. In the short era of written history man seems to be the only creature whose growth has been perceptible, and that growth has been in brain-power. We find that he has no more legs or arms or bones or muscles than he had ages ago. But way up in the attic of the house he lives in is a pulpy mass that is working miracles. There is the focus of growth. There is the gem that flashes out and seems in contrast to make other intelligences dark. Man has stepped onto the boards. He makes his debut, and the world of created beings sits dumb with astonishment at his acting. He is the one whom the Almighty "delighteth to honor."

But the Everlasting Love says, "All are my children, from the least unto the greatest; respect them as mine. My common love for you is proof of your common blood. Happiness finds the polyp on the rock; the flower by the roadside; the songster in the hedge; man in his home."

We beat and abuse—we eat and digest our poor relations, and think nothing of it. The strong-necked ox gives up his life that the fibrine of his muscles may strengthen ours. We dig up the clam and pull him out of his shell—poor little roll of glutinous matter!—and eat him without remorse. But when the relationship gets closer, and we find the same fibrine clothing the bones of man, we call the eating it cannibalism.

Every time we make a feast a score of lives are taken—lives just as precious to their owners as ours to us. It isn't the eating of the fibrine or the glutin that hurts us, but it is the smothering of mercy and the crushing out of benevolence. The most intelligent minds, the most exalted spirits, those farthest removed from the animal plane, have always had the tenderest regard for animals. It is the true poet of Nature who sees sisterhood in the flowers and brotherhood in the trees. When the plowshare of Burns turned down the daisy he saw the fall of a sister; and when the same share went tearing the nest of a field mouse, he pitied her as he would have pitied a human being.

So sacred has life seemed to some, even among the ancients, that they would eat nothing which had cost any creature its life. There was a school of Greek philosophy, centuries ago, which forbade animal food. Among the Hindoos, at the present time, there are many who never kill a creature however insignificant, but count it the hight of virtuous self-sacrifice to become the prey of beasts. In Siam priests are forbidden to destroy any living animal or vegetable. The Banyans even brush the ground before them to prevent crushing an insect in their path. Hospitals are built for infirm and wounded animals. It's no wonder that Englishmen conquered India so easily. Englishmen living on "rare roast," accustomed to the sight and smell of blood, used to the sight of expiring beasts, found but gentle foes in the land of fruit and rice. The Hindoo respect for animal life arises from a belief that the souls of men, after death, enter into the body of some animal. Other tribes of Southern Asia and Polynesia believe that trees are sacred—containing the souls of men. All these are acknowledgments of relationship, and whatever the source of their religion, it cannot be a bad one if it promote peace among mankind and prevent cruelty to the weaker races.

The intelligence of animals and their companionship with man forms the basis of Esop as well as the philosophy of Greece. There is something attractive to a child in the fancy that animals are persons—that they talk and reason together. Watch children playing with their pets, and you see the recognition of the "poor relation." While we, grown proud and warped, having lost the pure instincts of nature—see in animals only dollars and cents, a good pointer, or a fast trotter. It is the instinct of childhood to treat animals kindly, especially the pet birds, dogs, cats and horses. They are fed and talked to as if they possessed souls, and when they die are mourned with tears and buried with honors. How tender the feeling of that little heart, that, like he who was greatest in the kingdom of heaven, see the love of God caring for the lilies of the field and the birds of the air, and giving them foliage and plumage that exceeds the splendor of Solomon.

But the child that is jerked around by its parents, and boxed and cuffed, and made cruel and combative by example, will treat domestic animals and fellow-playmates in the same manner. It is unkindness to the brute creation that makes us brutal. We come to think that animal life is of little consequence, and then it soon follows that we disregard human life. A man insults you and you strike him down. Once it was the fear of a coward's brand that drove great-hearted Hamilton to meet the traitor Burr, and he was cut down in cooler blood than one would shoot a wolf. Who killed Alexander Hamilton? Whose bullet slew the great-souled Broderick? It was public opinion created by men who cared little for the life or liberty of their fellowmen. And that this indifference to our nearest kin comes along with our indifference to our poor relations is a parent. The sight of blood makes our tender-hearted school girls faint; but the fish-woman who spends hours daily amid the gasps of expiring salmon has no feelings of sorrow for the life she takes. Let our little boys and girls go to the butchers' shambles and get hardened to the sight and smell of blood and see the expiring throes of animals, and soon they will think but little of inflicting pain or taking animal life. And let our men and women look on at a judicial murder, where murderers die "game," and the sacredness of human life is gone. Frequent exposure to such scenes tends to brutalize us. When we consider the act of taking life, or its surrender, how much alike it is in the man and in the beast. Neither wants to die—both will fight for the precious boon. Our poor relations love and cling to life as tenaciously as we do, and since we give them no credit for immortality, we take away all the life they have.

But we see a growing respect for our "poor relations" in the fondness for animal forms in art, especially in painting. Ancient art embraces nothing of the kind. The human face and form was all that was thought divine enough for art. To be sure, they sculptured great griffins and dragons sometimes, but they drew on their terrified imaginations for them – they found no models in nature. Rosa Bouheur, on the contrary, has built her reputation upon paintings of a horse-fair, in which that noble animal is exhibited in every graceful attitude. Another of her paintings is a plowing scene, with the tired oxen lolling out their tongues, and one stubborn fellow pulling back on his yoke, just as obstinate men and women do occasionally. Landseer's painting of the "Dogs in Conrt" never wearies. Prang's chromos are, many of them, animal likenesses, and they are the most charming and attractive of any.

The likeness of men and women to animals is shown especially by caricature. The caricaturist sinks his darts at *man*. The "poor relation" never suffers by the comparison. Its a sort of confirmation of the Darwinian theory. If a man acts like an ass, or a monkey, or a goose, the artist so portrays him, and taking the hint he rises from beasthood to manhood. If a woman talks a great deal of nonsense or prides herself on her plumage, he draws her portrait as a parrot or a magpie, and if she represents modesty far from low things he high, it brings its blessing. No one desires to be thought to resemble our poor relations.

And so we find the claim to kinship follows us alike in the fields of physiological structure and mental faculty. Perhaps it is, after all, but a very superficial covering of clothes and finery that deceives us into the belief that we are men. The creatures we are and associate with, stripped of the covering of conventionalities, would stock a barnyard or a menagerie. The wolves we hunt down for entering our folds are first cousins to those who plunder our treasuries and rob our people under the cover of the law. The ass we load with burdens for the market have no longer ears than we who bear the burdens of oppression and eat the thistles of poverty imposed upon us by giant monopolies. We dare not point to everyday actions—to common-place men—to average standards of intelligence and morality to make good our claim to manhood. It is only when some stout, brave heart, sorrowing for the apathy and suffering of its kind, strikes the keynote of reform that we are lifted from our beasthood to the glorious plane of true manhood.

If a person swallows any poison whatever, or has fallen into convulsions from having overloaded the stomach, an instantaneous and very efficient remedy is a heaping teaspoonful of common salt, and as much ground mustard, stirred rapidly in a teacup of water, warm or cold, and swallowed instantly. It is scarcely down before it begins to come up, bringing with it the remaining contents of the stomach; and lest there be any remnant of a poison however small, let the white of an egg, and sweet oil, or butter, or lard—several spoonfuls —be swallowed immediately after vomiting; because these very common articles nullify a larger number of virulent poisons than any medicines in the shops.

Correspondence.

LET'S SWAP.

Ed. Agriculturist: The oft-returning real or fancied corner in coin that so vexes those that are short of the article suggests the question, Do we not use more coin than we need to? If one-third of the business of the country could be done without recourse to banks or coin, it would relieve the pressure on the other two-thirds of business transactions. Many of our boss mechanics could receive several tons of wheat from their customers who produce it, perhaps flour it at a mill owned by another customer, and deliver it to their workmen at the same, or less, price than they pay for flour at retail. A hundred weight of nice salt pork, delivered to a laboring man at the producer's price, would be far better for all parties than the same amount of pork bought by the "four bits' worth," at retail price.

Nearly all the productions of the country that are consumed in the country could be handled without handling cash. Even the little bill due the editor of the family paper might be settled to his satisfaction with some of the farm or the shop productions, and an extra sack of something put in would send the paper to fathers, brothers or friends "in the States." [That's so.—Ed.]

Many family men who work in the harvest field might profitable receive at their doors, before rains set in, a half ton of flour that would count them even better than the coin that the ranchman has with difficulty obtained for them. If every ranchman in the country could pay one hundred dollars of harvest expenses without recourse to coin or banks it would make a noticeable relief of the usual harvest pressure.

The operatives in many Eastern manufactories would be very glad to get a car-load of canned fruits, flour, etc., from California and return goods to balance the account. The sections with which we exchange but little are sections whose *workmen* we had better import rather than their goods. Wisconsin and Michigan wagons had better be made in California. Let us "trade most with those that trade most with us."

It is, or ought to be, for the interest of bankers and mechanics that the people flourish. One well-fed, fat, spirited team, though *harder to drive*, is worth more to a ranch than a dozen submissive, half-starved "crow baits."

C. A. W.

Cozy Nook, July, 1876.

THAT "MATTER OF POLICY."

Ed. Agriculturist: Mr. O. L. Abbott, in a letter published in your June number, calls you ta task for republishing a "blue" account of bee-keeping in San Diego. I had read the "blue" account with much satisfaction, feeling sure that though "blue" it was also true.

We are told by that prince of physicists, Tyndall, that blue waves of light are far smaller than red waves; these latter, consequently, would pass through media impervious to the former.

Now, Mr. Editor, it seems to me that the eye of your California journalist contains some film that checks the blue rays. Blue never disturbs the equanimity of his optic nerve. The yellows and greens of jealousy occasionally tinge his pen, but rose is the color he delights in. Whatever tint is visible to the ordinary eye, the journalistic eye sees but rose.

To those who live in California, and understand this little peculiarity of literature, no harm, perhaps, accrues; but to outsiders, who are seeking whither to emigrate, a great wrong is done. There are annually hundreds, if not thousands, who come to this State misled by overcolored statements of facilities to be enjoyed here in making homes and acquiring farms. They are families of small means, and are led to expect that on arrival they will be able to obtain a quarter section of Government land, fit for the plow, at Government price. These expectations are derived from a perusal of the aforesaid literature. I do not say that any special pamphlet or journal states it as an express fact that farming lands in healthy localities can be had at $1 25 per acre, but the reader of current journalism is led to infer that such is the case. The *Bulletin* lately blamed the Chinese for keeping thirty millions of acres of public land unoccupied. Had they blamed Nature for forming rough chapparal hills of dry, hard grit, quite uninviting, as the San Diego bee-keeper found them, they would have been nearer the truth—a "blue" truth, though.

The copy-book still instills into the youthful mind that "honesty is the best policy," and I am prepared to back the copy-book against Mr. O. L. Abbott. I maintain that the immigrant who comes to this State induced by dishonest representations is a positive detriment to the State. He is apt to become a public burden while here, and to return home to disseminate a far "bluer" opinion of California than the clear truth warrants.

It would be well if all intending immigrants could be advised that ordinary farming land ranges in price from $25 for unimproved, to $300 for well-located and improved, per acre; that crops are very precarious on account of drought, especially in inland counties; and, finally, that "all this fine talk of our destinies is, half of it, ignorance, t' other half rum."

A little less trumpeting, gentlemen of the press. Let another man praise thee, and not thine own mouth.

Edw. Berwick.

THE INDEPENDENT PRESS.

by a. g. s.

Editor Cal. Agriculturist: You will please accept the friendly greeting of a once active typo brother, now for some dreary years prostrated by calamity and laid on the shelf of helpless retirement. An editor is apt to find a "hard road to trabel," especially if he ventures to run a sharp and forcible reform journal, against the raging tide of money power and popularity, amidst the fogs of party and sectism, ignorance, prejudice, antiquated custom, and old Madam Grundy, and he naturally craves the sympathy of his fellow-craftsmen and of all high-thinking minds. Who can be independent? It takes a hero in the type wilderness, as well as with the plow to break the grubby field, and no puny or timid hand can ever accomplish great things. Realizing this fact, you have probably counted the cost, and made up your mind for a manly struggle and a valiant battle.

The newspaper is a universal necessity, if Hottentotism is not the settled law and gospel; and wherever you find refinement in society, with mental development and moral rectitude, and external polish and attraction in houses and lands, you may be quite sure the smart newspaper is scattered freely around. And, furthermore, if new departures are opening up, it is pretty evident that the audacious and truth-telling editor is making things hot, and shaking up the dry bones of old fogyism and bloated upper-tendom. So, all the working class, who are proud of themselves and their country, and ambitious to shine and excel in the elements of true civilization, will be proud of your paper and subscribe liberally and write abundantly. Come on, then, come on! Your clean columns, unclocked with party tondyism and cowardice and selfish compromise, will welcome and encourage a free and fearless correspondence, which should characterize all American journalism in the glorious Centennial year.

I place the newspaper always at the very head and front of every public enterprise and institution; and, say what you will of professions and professional men, the newspaper ranks far above them all, in whatever department, because it includes and represents them all. It is, indeed, the brains of the world condensed—a real schoolmaster and mighty educator in every family.

Wonderful upheavals, evolutions and revolutions are marking our time with the convulsive throes of regeneration and a new birth, social and actional. It is the era of labor, and the toiling classes, everywhere, are called to dignity, honor and self-respect. The workers are included in the common household and brotherhood, and will therefore not be long content to stay out in the cold, or in the hot sun, but must claim each his full and just share in the noble strife, the victory, and the glory.

Human toil is no longer classed with the forced draft of the horse and ox, but is the voluntary choice of the highest manhood, which scorns the sneers of haughty wealth, pride and ignorance, and stands up independent — making *labor*, not money, the enduring cornerstone of all government and society, and the chief virtue of all politics and religion.

Workingmen and women produce, and should claim, all that kings or Belknaps steal, eat, wear and waste, and it is about time for the pennyroyal blood of money aristocracy to step down and out. All the world belongs to the workers, and the newspaper is their speaking trumpet, with co-operation for the mighty password! Common sense in everything will lessen taxes and increase our well-being. Support the voice and the press that speaks in your behalf. Your own independence demands the independent journal. Support it, dear toiling brothers and sisters, as it labors for you.

Champlin, Minn., July, 1876.

A CALIFORNIA LAND TRANSACTION.

An Open Letter to the Hon. Mayor, Council, Voters and Tax-Payers of the Pueblo San Jose and People of California.

Cozy Nook, July 1st, 1876.

I take the liberty to address you from, and in behalf of, an afflicted community. I do so with some confidence, as circumstances have placed me in a different (I cannot say at present whether better or worse) position from most of my neighbors, for I never bought the "city title" to my place.

The situation, as I understand it, is this: Some ten or twelve years ago, a number of industrious, enterprising men who had seen too much of land grants and land renting, found what they believed to be a lot of Government land, in the mountains about eighteen miles from your beautiful city. The land was difficult of access, and as a whole poor in quality. Believing their title would be sure, and under the homestead law, very cheap, they had the courage to face the difficulties and go to work to make themselves homes in the mountains. The difficulties were even more than they anticipated. The grizzly bears killed their stock, and the smaller animals made fearful inroads on their poultry. The wild Spanish cattle and horses tramped and destroyed their grain. The State, county and district taxed them on the full value of their homes, and for some time they received little or no benefit from the school and road funds. An amount of hard work that nearly bankrupted many settlers was obliged to be done to get an outlet for wood, coal, etc., the case being such that the county could do but little on the roads.

About the time the roads could be used, the city of San Jose was supposed to have obtained title to the land, and a man who believed he had some rights to the land made application for the whole tract of 7,000 or more acres. His application, although refused by the council, obliged most of the settlers to buy the "city title"—the settlers receiving for their money one of California's most nauseating institutions, a "quit claim" deed.

The settler's lot had been hard work and poor pay, consequently there were about as many mortgages to record as deeds. To men accustomed to prosperity, the interest on the mortgages, added to their already heavy load, would have seemed unbearable, but there is a great deal of hope accompanying large hearts and strong hands, and the settlers were getting much attached to their healthy homes. The wild animals were fast disappearing in answer to the crack of rifles that wasted very little lead; the roads and school privileges were much improved, and better times seemed near at hand, when, to the consternation and disgust of all the settlers, a U. S. Deputy Marshal appeared and served them with papers issued at the instigation of what I once heard called "The San Jose Land Company," but usually known by the pungent term of the F— T—s. Prompt and honorable action on the part of the Pueblo authorities saved many from loss by this annoyance, as the case was very promptly thrown out of court; but the decision was not soon enough to save many from buying another "quit claim" to keep their title clear enough to satisfy the owners of the mortgages.

And now, after ten or more years of struggle, comes the "kill or cure" of the settlement, in the shape of a Spanish grant called Los Huacas, which seems to have permanently and wholly swallowed up Government land, city title, F. T. claim and all. But the owners of Los Huacas offer a tonic called a *warrantee deed* instead of another quit claim, and very considerately agree (in articles of agreement given to many of the settlers) to take any bonds of the Pueblo San Jose that may be issued by the city to recompense settlers who had paid the city *something* for nothing, said bonds to apply as credits on articles of agreement given by Los Huacas owners to settlers.

It is these lands I have in view as I write you, and I have made the statement much longer than I would had I not known that many just and honest voters and tax-payers of San Jose were not acquainted with the facts in the case.

I am told San Francisco was compelled by law to refund in a similar case.

The most profitable part of "going to law" is usually the part swallowed by "those who manage the case" for the contending parties, and I believe there is too keen a sense of justice, too true a business economy, too much laying out for future prosperity in the people of California's most beautiful city for them

) think for an instant of avoiding an onest obligation by legal dodging.

Please allow me to state a few reasons hy I think it is good policy to issue nd show intention to issue these bonds s promptly as possible.

It is right, and *right* is always No. 1 ood policy.

A large share of the settlers are more r less indebted to the merchants and lechanics of San Jose. Whatever brings elp to the settlers, brings pay and increased custom to the city. For the city) do justice to the settlers, is but for ne hand to put money into the other.) has been observed that a mountain ettlement once broken up is hard to re-ettle. The old settlers are strongly at-ached to their homes. They take in ousands of dozens of eggs and pounds f butter to trade with San Jose for oods, etc. Nearly every dollar earned y this settlement goes directly to the usiness men of San Jose.

You have all heard of the goose that id golden eggs for her master. You nbutiess remember her tragic fate and er master's disappointment.

This settlement, once broken up, will) very likely to become a sheep range, ad the profit on a range is about as apt) be spent in San Francisco, New York, · Germany, as in San Jose. Seven ousand acres of sheep range will bring it a small part of San Felipe's present ade to San Jose.

We have now good roads, and a No. 1 rosperous school; many settlers have nquered from obstinate nature a small ot for an orchard and grrden, and early every man, woman and child not flicted by hereditary disease or accident in the best of health.

The city's bonds for principal paid, ad a fair rate of interest, will do much rwards lifting the, at present, unbear-ble load of debt that has been coiling, ke an anaconda, around our hard-work-ig community. There may be obsta-es in the way of the immediate issue f the bonds, but where as capable a ommunity as yours feels a *will*, they ill certainly find a *way* to ease the pres-ure, if not to remove a part of this rushing strain before January 1st, 1877, nds many flying homeless through pace, like pumpkin seeds from between giant's thumb and finger. God grant nat any that may be squeezed out may ght on, land take root in more genial oil covered by peace titles!

Most honorable Mayor, City Fathers, nd influential citizens, may this settle-ient still exist and pack eggs to your ively city?

Most respectfully and kindly,

Yours, Chas. A. Wyman.

LETTER FROM KERN COUNTY.

Panama, Kern Co., July 9, 1876,

Ed. Agriculturist: I have had to almost leave off all letter-writing, because f the press of work consequent upon tarting a new place. Making ditches nd breaking land put planting so far ehind that now, when we ought to be ating green corn, mellons, tomatoes, tc., they are only half grown. I have ast harvested the few

ONIONS

lanted for home use. They did finely; ome weighing from 1½ to 1¾ pounds ach, and were grown on moist land that eeds no irrigation. Many of those on he moistest part of the land sent up a talk and made sets again. Will they be ood to plant? I think they will be more nclined to go to see again.

[Such buttons as are produced the ame year the buttons are planted are not ood to plant for onions, as they will be likely to go to seed again the same way. Only such buttons as are grown from selected onions—perfect bulbs grown one season and transplanted the next to produce buttons—should ever be used for planting.—Ed.

POTATOES.

Early Rose potatoes produce well and do not incline to rot. Early Goodrich, the same. Peerless produces fine tubers and are keeping well; on hill weighed 3¾ pounds; all large. Early Ohio has proved a failure for two years. New York Late Rose has not done well, and rotted badly. I have Burbanks, Dunmore and Excelsior yet to dig. Brinnell Beauty has not yielded well.

Pie-plant roots, seedlings, set late last spring have furnished some good stalks for pies. It is going to be a success here.

I set one Houghton's gooseberry bush last sprnig, and it produced a full crop of fine fruit. It seems as if almost everything will grow upon this Island.

DAIRYING, ETC.

Good alfalfa hay can be had in the field for $4 per ton, or $5 in stack, or give half for cutting and putting in stack. While butter is 37 cents per pound, and cheese 16 cents, what a chance for dairy business.

This is the best place I have yet found for a poor man who is willing and able to work, for there is no time of the year that he cannot be planting some crop. Our worst trouble is the rabbit; but a petition is being circulated now to have the county pay five cents for each pair of ears, and if they decide to do that, it will thin them some, as parties can take off the ears, then ship the rabbits to San Francisco, and thus get 60 cents per dozen over those from other places. Many have been killed with phosphorus, which the farmers are putting out, mixed with shorts or corn meal.

We are still planting corn; have heard of good crops made as late as July 13.

We are testing the banana here. We received six plants the other day, which are in the hands of three different parties for trial.

I am too tired to write a letter; can only jot down ideas for you; may send send more such notes in the future if you like them. Yours, J. B, R.

[We would like to get such notes from every district in the State.—Ed.]

A WORD OF CAUTION.

Santa Clara, July 12, 1876.

Ed. Agriculturist: In this hot, dry country, is it not wisdom and economy to supply every means in our power to avoid destruction and ruin by fire? Steam threshers are excellent, it must be admitted, for threshing grain; but they are also very destructive. Would it not be well for the farmers if the manufacturers would attach a force-pump that could be thrown in and out of gear in a moment, and be driven by the engine, also a piece of hose to direct the stream? And, further, I would advise to have ready about six pails full of water, in case the pump should fail to work properly. Farmers are very apt to say there is not much danger; but there is, nevertheless, and wisdom says, Prepare!

I have received many valuable ideas from your interesting and instructive little paper. Please accept this poor one in return. Yours, respectfully,

Geo. M. Brown.

Stack your straw. Somebody's stack will want it if yours does not. Its actual value is one-third that of good hay.

Pisciculture.

Concerning Fish and Fish Culture.

SHAD in the Hudson river had become nearly extinct until the Fish Commissioners of New York caused it to be stocked with 100,000,000 per year for several years; the consequence is that they have not been so plentiful and cheap for forty years as now. The rascally pot-house netters, however, take every opportunity to stretch their nets surreptitiously across the third of the stream reserved to let them come up the river to spawn. Seth Green, that veteran pisciculturist, is now stocking the river with sturgeon in immense numbers, that in a few years will go through their nets as if they were a piece of gauze. The Hudson river sturgeon grow to an immense size, attaining frequently to the length of ten or twelve feet, and weighing from four to five hundred pounds.

Another gratifying practical result of fish planting is that in the Potomac where black bass were entirely unknown until it was planted, they are now caught in strings of from thirty to sixty, weighing from two to four and a half pounds, in a day's fishing.

This breeding of fish and stocking all the inland lakes and rivers is simply a question of food for the people, as much as raising grain, beef, pork, etc. The United States make an annual appropriation of $30,000 to procure fish from foreign waters which are unknown to us, and to change the breed of such as we have, which is as much required as to change the breed of everything from the human race to potatoes. Almost all of the States have now efficient fish laws, and very many make liberal appropriations to stock all the public lakes within their borders, under the supervision of their boards of fish commissioners, as well as the rivers. Canada does the same.—*Cor. Chicago Journal.*

Gold-Fish.—"How beautiful!" she exclaims, as she stands gazing at my window, in which is hanging a globe containing a couple of ruby gold-fish.

"Such a lot of time and trouble it must take to keep them!" declares her companion, at the same time gazing with admiring eyes on the brilliant golden beauties as they float, dive and execute the most indescribable twists and turns in their crystal palace.

"Yes," replies the first speaker, with an audible sigh, "if I could spare the money, but you know—" And she metaphorically clasps her purse, and with heartless inconsistency turns away from one of the most beautiful of God's creation, and orders that "love" of a bonnet, which you know to cost nothing less than $25.

Dear, oh dear! When will we learn to discover the true and the beautiful? When will we sppreciate the wonders that He has created and discard the hollow mockeries of to-day? But it is not for me to moralize, and so to my subject.

The first thing, after decided to keep fish, is to purchase a globe; mine held about three quarts and cost the enormous sum of $1. The globes may be obtained of any establishment selling chinaware. Be sure and ask for French plate glass; examine carefully, and refuse those containing flaws or irregularities. If you cannot afford a globe, or wish to experiment, you can procure one of those old-fashioned wide-mouthed candy jars.

The fish, costing twenty-five cents each, you can get of any bird-fancier. Lift your eyes from the tantalizing beauty of the large fellows, and select two not longer than three or three and a half inches. (I am supposed to be stocking a globe holding three quarts of water.)

Take a quantity of silver or common white scouring sand, and after thoroughly cleansing in several courses of water distribute it on the bottom of the globe to the depth of an inch. Filling the vessel to within half an inch of the top with fresh river water, sink in the sand several or as many pieces of water plant as your fancy and good judgment dictate, tate, being careful not to crowd the globe and thus impede the free motions of the inmates.

Any pond or running stream contains numerous varieties of delicate water plant, which is absolutely necessary in your globle. Sipa or cuttigs, when fastened in the sand, will soon send out their lovely little branches, adding greatly to the beauny and cleanness of your globe, as well as to the sustenance and longevity of the gold-fish.

Several tadpoles—these are the best of scavengers, and of course are necessary —a dozen of water-annils, and one or more "duce," will make your outfit complete, and one of which you will never tire.

We have now come to the most important part of our subject, namely, food. Garden worms, not more than three at one time, cut in fine bits, are greatly relished, and indeed are their chief food. Fresh beef in winter is a good substitute. Bread is not at all deleterious, as is a too common supposition. As fresh water contains any number of animalcules, never feed your fish oftener than once in two weeks; and when you think their appetite has been appeased, you must change their water.

It is a never failing sign when the fish will persist in floating around the top in search of air that the water is impure and the globe needs renewing with fresh water.

Never let the fish hang for any great length of time in the sun, and once a day if possible, let the cool air upon them. When it is desired to change the water, the inmates must not be removed with the hands, but with a simple little net made of any thin material.—*Harper's Bazar.*

The Distribution of Fish.—Statistics of distribution for the years 1874 and 1875: Shad, 18,689,550; Penobscot salmon, 2,294,565; California salmon, 5,-153,740; total, 26,137,855. To this is to be added the hatching and distribution, during the spring and winter of 1875-6, of California salmon, Penobscot salmon, land-locked salmon, and lake white fish, not yet completed, but amounting to at least 14,000,000 fish; thus making a total of 40,000,000 supplied by the United States Fish Commission in three years. This, at the assumed ratio of 1 to 200, would represent the proceeds of 8,000,-000,000 eggs laid in the natural way and subject to all the especial perils of natural spawning.

The little salmon will be ready to go into the large rivers about the middle of December, when fresh water fish that might otherwise devour them, will be in a state of torpidity; and when the warm weather comes will be acclimated and able to take care of themselves.

Mr. Ccp married Miss Fish, in a Connecticut town, the other day. The affair passed off swimmingly, and terminated in a Cod-Fish ball.

SETH GREEN, the noted sportsman and fish culturist, in the *Forest and Stream*, makes what he considers a very important suggestion to trout fishermen. He says that the most effective hook in fly-fishing, and one which he himself always uses, is made from a strong needle, annealed, bent and tempered, and consequently without a barb. He asserts that only in this way can a really sharp hook be obtained; that the tension of the rod is amply sufficient to keep such a hook in its place, and that a very gentle stroke will fix the keen point in the mouth of the fish.

Porcine.

The Original Breed of Berkshire Swine.

TRADITION, and the earliest published accounts of what has long been particularly distinguished by the name of Berkshire swine, represents them, down to about a century since, as among the largest breeds of England—weighing, full grown, from 700 to 1,000 pounds, or more. The "Complete Grazier" describes one, in 1807, as weighing 113 stone (904 lbs). This was exhibited, with others, by Sir William Curtis, at the cattle show of Lord Somerville, in that year. Johnson, in his "Farmers' Encyclopedia," London, 1842, says that they weighed at that time from 50 to 100 stone (400 to 800 lbs). The latter of these, doubtless, were of the improved breed.

Originally they were represented as being generally of a buff, sandy, or reddish-brown color, spotted with black, occasionally tawny or white spotted in the same manner. They were coarse in the bone; head rather large, with heavy flop ears; broad on the back; deep in the chest; flat-sided, and long in the body; thick and heavy in both shoulders and hams; well let down in the twist; bristles and long curly hair, with rather short, strong legs. Their meat was better marbled than that of any other breed of swine in Great Britain—that is, had a greater proportion of lean freely intermixed with fine streaks of fat, which makes it much more tender and juicy than it would otherwise be. They were consequently, from time immemorial, preferred to all other swine there for choice hams, shoulders and bacon. They were slow feeders, and did not ordinarily mature till two and a half or three years old.

It is thus that I find the Berkshire hog figured and described in the earliest English publications to which I have been able, thus far, to obtain access. But in the second volume of the magnificent folio edition, illustrated with colored plates, now lying before me, of "The Breeds of the Domestic Animals of the British Islands," by Professor David Low, published in London, in 1842, is a portrait of a Berkshire as I have described above, except being of rounder body and somewhat finer in all his points, with ears like most of those of modern breeding, medium in size, and erect instead of flopping. This portrait is of a sandy or reddish-brown color, spotted with black; the feet and legs for nearly their whole length, white, slightly streaked on the sides and behind with reddish-brown. It, of course, represents one of the old breed considerably improved, and marked, as I occasionally found them in all my visits to Berkshire, down to 1876. But the pigs which I saw thus marked were of the same size and shape, and as fine in all their points, as the general run of the black, slate, or plum colors of the present day.

FORMATION OF THE IMPROVED BERKSHIRE SWINE.

Tradition tells us that this was made by a cross of the black or deep plum-colored Siamese boar on the old unimproved Berkshire sows. Other traditions assert that the black and white spotted, and even pure white Chinese boar was also sparingly used to assist in the same purpose. I can well believe this; for I often saw swine in Berkshire spotted, about half and half black and white, in addition to the reddish-brown, or duff and black, and so on almost up to a pure plum color or black. The produce of the above cross or crosses was next bred together, and by judicious subsequent selections, the improved breed, as we now find it, became, in due time, fixed and permanent in all its desirable points.

Another feature, aside from the half and half black and white spots hitherto occasionally found to mark the improved Berkshire swine, which may be adduced in support of the supposition of a sparing cross with the white and light-spotted Chinese, is the shape of the jowls. All those which I have bred in my piggery, or imported at different times direct from China, or have seen elsewhere, had much fuller and fatter jowls than the Siamese. Some of the breeders in England preferred the fat jowls, because carrying the most meat; others the leaner as they said this gave their stock a finer and higher-bred look in the head.

THE SIAMESE SWINE.

In the same volume of Professor Low which contains the Berkshire portrait as described above, is a colored plate of a Siamese sow. She is a dark slate, varying to that of a rich plum color. The two hind feet are white; the fore legs and feet white, shaded in front with plum. The face is dished; head fine, with short erect ears; shoulders and hams extra large; back broad, with a deep round and longish body. This sow is represented with a slightly swayed or hollow back, at which we need not wonder, considering its length, and that she has a litter of nine great fat pigs tugging away at her dugs. These Professor Low says were got by a half-breed Chinese boar, which I presume, from the color of the pigs, was white; for some of them were pure white, white others are mixed slate or plum and white, and one is a buff, with black spots, like the original Berkshire.

I will now describe the Siamese swine, such as I possessed and bred for several years on my own farm. They were dark in color from deep rich plum to dark slate and black; had two to three white feet, but no white on the legs or other parts of the body. The head was short and fine, with a dished face, and rather thin jowls; ears short, slender and erect; shoulders and hams round, smooth and extra large; back broad and somewhat arched, except in sows heavy with pig or suckling pigs, but even then it was straight rather than swayed; body of moderate length, deep, well ribbed up, and nearly as round as a barrel; chest deep and broad; twist well let down; legs fine and short; tail very slender and well set, with a handsome curl in it near the rump; hair soft, silky and thin; no bristles even on the boars; skin thin and of a dark hue, yet when scalded, scraped white; flesh firm, sweet and very tender, with less lean than in the Berkshire. Although so compact, round and smooth in build, they had a fine, high-bred, upheaded style, especially in their walk, which instantly attracted the attention of all who called to see them. They were moderately prolific, and hardy as any other breed of swine I ever kept—the extremes of heat and cold never injuring them. They were gentle in disposition, very quiet, and easily kept, and would partially fatten on good pasture, or coarse raw vegetables. They could be made fit for the butcher at any age; matured at 12 to 15 months old; and when fully fattened, generally weighed from 250 to 300 pounds, and occasionally going to 350, or even 400 pounds. They had very fine bones and light offal.

It was, doubtless, with Siamese boars as perfect as I have here described, that the cross was made on the original Berkshire sows, which has contributed so largely to the formation of the improved breed, held in such high estimation for a full century or more past.

WHEN WAS THE CROSS MADE?

Several aged men in different parts of Berkshire, of whom I inquired on my first visit to England, in 1841, informed me that they had known there improved swine of the same type as I then found them, from earliest childhood. But the most particular, and apparently reliable account I was able to obtain, was from Mr. Westbrook, of Pinckney Green, Bysham, who told me that his father possessed them as early as the year 1780, in as great perfection as the best then existing in the country. Thus it will be seen that the improvement is now at least a century old, and more probably a century and a quarter; for it would have taken some years back of 1780 to begin a new breed of swine, and get it up to a fixed type at that period.

CHARACTERISTICS OF THE BEST IMPROVED BERKSHIRE SWINE AT THIS TIME.

Snout and head fine and rather short, but larger in proportion to the body in the male than in the female, and with a bolder and more determined expression; face dished and broad between the eyes; jowls full or thinner, according to the fancy of the breeder; eyes bright and expressive; ears small, thin and upright, or inclining their points a little forward; neck short, rather full in the throat, and harmoniously swelling to the shoulders; chest broad and deep; back broad and moderately arched; rump nearly level with it; well let down in the twist; body of good length and depth, round with well sprung ribs, and straight along the sides and under the belly; shoulders, above all, in the boar, extra thick, yet sloping smoothly to the body; hams broad, round, deep, and so thick through from side to side, particularly in the sow and barrow, that, standing directly behind, except when pretty fat, the sides of the body are scarcely seen between them and the shoulders; legs fine, strong, of moderate length, and set rather wide apart; feet small, with clear, tough hoofs; tail slender and well set, with handsome curl near the rump; bones fine and of an ivory-like grain and hardness; offal very light in comparison to weight of carcass; hair fine, soft and silky; no bristles, even on the boar; skin thin and mellow, with elastic handling of the flesh beneath; quick and spirited in movement; stylish in carriage, and, in the boar more especially, bold and imposing in presence.—*From Allen's Prize Essay.*

THE July number of the CALIFORNIA AGRICULTURIST is on our table. In amount, variety and quality of matter, indicated by its title, it has no equal on this coast. CAL. AGRICULTURIST PUB. CO, San Jose—$1 50 per annum.—*Catsrocille Argus.*

Don't burn your straw. Stack it.

Entomological.

Combating Insect Foes.

PROF. F. H. SNOW, of the State University of Kansas, tells us how he would make war against noxious insects; in one one of his late educational lectures. He suggests that it should commence with—

1. Legislation to compel every man to keep his grounds free from insect pests. No one has a right to foster noxious agencies for the destruction of his neighbor's crops and fruit.

2. A bounty might be offered in certain cases, by the county, State or General Government, for the capture of injurious insects. A reward of twenty-five cents a bushel for locusts during our recent visitation by this scourge would doubtless have prevented a large portion of the damage inflicted. Such a reward would certainly be as legitimate as the customary bounty for gopher skins.

3. The introduction of parasites should be undertaken by the General Government. Many of our most destructive insects have been introduced from Europe. In the Old Country they have many parasites to keep them in check, but as yet few of these parasites have made their way to this country, so that our foreign foes have proved most destructive on account of the absence of their natural checks. That the plan proposed is a feasible one has been proved by Dr. Le Baron, the Illinois State Entomologist, who has successfully introduced into northern Illinois a parasite upon the apple bark, louse.

4. Every State in the Union should employ a competent man as state entomologist, who should give his whole time to the work of investigating the habits of insects, and disseminating information among the people. Messrs. Fitch, Riley and Le Baron have saved millions of dollars to the great States of New York, Missouri and Illinois, by their indefatigable entomological labors. The salaries paid to these men have been a thousand-fold returned to the States employing them.

5. The legal protection of insectivorous birds. A commission should be appointed to determine what birds are entitled to this protection.

6. The plan proposed for the appointment of a national commission for the prevention of the national calamities occasioned by insects is worthy of indorsement by every farmer and fruit-grower in the land. The petition to Congress for such a commission should receive universal signature.

7. I would finally suggest that if our people were more generally familiar with the subject of entomology, and were able to distinguish between the beneficial and injurious species of insects, our universal enemies would be more intelligently and effectually resisted. To this end I would earnestly recommend the introduction into our schools of the elements of this extremely practical science. Independently of the educational advantages of natural history studies, the "practical" value of a knowledge of plants and insects should forcibly commend botany and entomology to those who determine the course of training in our common schools. If our children were taught to distinguish between their friends and foes in the insect world, a large proportion of the annual loss entailed upon us through ignorance would undoubtedly be prevented. And since the majority of those who attend our public schools will be connected for life with the pursuits of agriculture and hor-

ticulture, it is easy to understand the propriety, and even the necessity, of introducing into the courses of study those "practical" branches a knowledge of which is essential to success in those pursuits.

Birds, Insects and Crops.—It won't do any harm to repeat, for the benefit of our many new as well as old readers, that birds pay ten-fold for all they eat on our farms in destroying insects. An old writer of fifty years ago says, in speaking of the cut-worms, mice and insects, that he erected thirty boxes in different parts of his garden, which were soon occupied by birds, and he found they soon disposed of the enemies of his cabbage plants and vines.—*Rural Sun.*

The Horse.

Nebuchadnezzar.

BY IRWIN RUSSELL.

Yon, Nebuchadnezzar, whoa, sah!
Whar is you tryin' to go, sah?
I'd hab you for to know, sah,
I's a-holdin' oh de lines.
You better stop dat praucin';
You's pow'ful fond oh dancin',
But I'll bet my yeah's advancin'
Dat I'll cure you oh your shines.

Look heah, mule! Better mine out—
Fus' t'ing you know you'll fin' out
How quick I'll wear dis line out
On your ugly stubbo'n back.
You needn't try to steal up
An' lif' dat precious heel up;
You's got to plow dis fiel' up,
You hea, sah, for a fac'.

Dar, dat's de way to do it!
He's comin' right down to it:
Jes' watch him plowin' t'roo it!
Dis nigger ain't no tool.
Some folks dey would 's beat him;
Now, dat would only heat him—
I know jes' how to treat him:
You mus' reason wid a mule.

He minds me like a nigger.
If he was only bigger
He'd fetch a mighty figger,
He would, I tell you! Yes, sah!
See how he keeps a-clickin'!
He's as gentle as a chicken,
An' nebber thinks o' kickin'—
Whoa dar! Nebuchadnezzah!

* * * * * * * *

Is dis heah me; or not me?
Or is de debbil got me?
Was dat a cannon shot me?
Hab I laid heah more'n a week?
Dat mule do kick amazin'!
Dat beast was sp'iled in raisin'—
But now I 'spect he's grazin'
On de oder side de creek.

Treatment of Sick Animals---Cough in a Horse.

THERE has been an internal wound, obstruction or irritation, and the cough is only a symptom or evidence that nature is trying to heal or remove it, and should no more be stopped till the cause is removed than the temporary scab that nature throws over an external scratch should be removed before the wound is healed, when it comes off itself. It matters not whether the wound or obstruction is nasal, laryagital, bronchial, thoracic, or stomachic, caused by dust, poison or overwork, the cough will surely stop when the cause is removed.

No doubt ginger, or other poison, might be more obnoxious to vitality than the injury, and temporarily call of the repair force for its own expulsion and thus abate the cough for a time, but to no greater real benefit than the paying of debts with money hired at a higher rate of interest than that on the debt, which is sometimes, but rarely, expedient, the debtor still has the debt to pay, and "bonus" besides. Not to burden your columns with statistical proofs, I will incidentally give one which also shows that "Light is dawning in the East."

In a recent New York *Journal of Health* containing many useful hints, with "liver pills," etc., its celebrated M. D. proprietor says substantially, "Never try to stop a cough; it is nature's way of removing phlegm from the chest; much better take something to increase the cough," etc.; and also adds that he is the first publishing the (nature cure) doctrine, which was systematized, successfully practiced and taught by lectures by its talented, self-denying and worthy M. D. discoverer, after ten years' extensive allopathic practice, about fifty years ago; and by him practiced till his recent death, at eighty-six, and taught in several excellent works of his.

"Spasms in pigs," "horn ail," mentioned in the same paper (Jan. 29, 1876) and all ordinary diseases, in man or beast, are the most successfully treated on the "nature cure" system; and nothing can be done to help nature, but to remove all hindrances possible and supply all natural wants. Make the patient comfortable and let nature work. Poisons tend to death when taken by well animals, and how absurd to think that their nature is instantly changed so as to tend to life, by being taken by a sick, and perhaps already nearly dead animal. "Like, cause, like effect" is as true here as everywhere else.

In all acute, inflammatory cases, fevers with quick pulse and coated tongue, colds, etc., do not tempt the palate, and give no food unless it is desired in a natural and plain condition, that is, without stimulating condiments. Food in the stomach, uncalled for, is a hindrance to recuperation. Unless there is heat and pain in the bowels, do not disturb them; if there is, pure, warm water enemas, and fomentation are usually sufficient.

Always remember that nature knows her own business best, and don't try to force action with disagreeable interference. Unnatural, stimulating food and drink in an unnatural manner and quantity, have often given "fits" to other animals than voracious pigs, and "urine and soap" are not the natural and best remedy; abstinence, rest and natural food and drink are far better.—*New England Farmer.*

The Horse's Foot.—A competent veterinary surgeon writes as follows on the subject of that all-important part of the horse, namely, the foot:

Most of the horse-shoers of the country prepare the foot, fit the shoe, and secure it to the hoof in the same manner that a wood butcher fits a shoe to an old wood or ox sled. The mechanism of a horse's foot is one of the most wonderful and ingenious structures that can be found in all the works of the Creator. Beneath and in the rear of every hoof there is a frog, which is a tough and elastic pad for preventing injury to the animal whenever he plants his foot suddenly on any hard substance. Large rolls of cylinders of india-rubber are placed beneath the railway cars to prevent injury to any part of the car or to the cargo with which it is loaded. The frog beneath the foot of a horse is designed to subserve a similar purpose. But the manner in which most horses are shod lifts them as it were on short stilts, so the frog cannot perform its appropriate functions.

If we look carefully at the young horse when he is trotting or running, it will be perceived that every foot is brought to the ground in such a manner that the frog receives the powerful blow. By this means all injury to the animal is avoided. Science teaches us to permit the frog to develop and point downward. But most blacksmiths seem to think that the all-wise Creator made a mistake when He formed the foot of the horse. Hence they fail at the frog with red-hot burning irons, with edge tools and with any other appliance that will enable them to remove this extraneous excrescence. Illustrious minnies! Why not shave away all the rough, callous, adipose tissues beneath their own heels, and allow the bare bones to rest on an iron plate inside of their own boots and shoes? No frog, no foot; no foot, no horse.

Horses for Farmers.—For the ordinary American farmer, who cultivates the average-sized farm of about 100 acres, in a variety of crops, a breed of horses is required suited to the heavy work of the farm, the hauling of crops to market, and also possessing the fleetness desirable in carriage horses.

Such farmers cannot afford to keep separate teams for draught and carriage purposes. They want horses which, when hitched to the plow, will move with unyielding strength through sod and stubble, will draw the wagon loaded with grain, hay, corn or roots to the barn or stack, the loaded manure wagon over the soft, yielding earth; that will force the reaper through the stoutest grain, or the mower through the thickest grass; that will move wagons heavily laden with the farm products to market, and at the same time, when the farmer wishes them to get over the ground rapidly, with carriage or light wagon, will be on hand.

Some will say that the farmer has no business with fast horses. If he has not, we should like to know who has. He is generally located miles from his market town, whither he is often obliged to go several times a week, to market, on business, to church or lectures, and he cannot afford to waste much of his valuable time on the road.

The lord knows animals have enough to suffer from hunger, thirst, cold, from beating and cruel and thoughtless owners. They are cut and slashed, burned and blistered without mercy, and still editors will publish every old fogy remedy handed down from our old, heathenish, ignorant ancestors; and more horses have been spoiled by knives and hot irons than have ever been cured by such treatment, and it is time such abominable practices were abolished and a more common sense way adopted. Doctor a horse as you would yourself, and your will find it a vast improvement on the system. If your horse has colic, instead of trotting him around all the time, let him lie still, and cover him with three or four blankets and give large injections of warm water and he will soon be all right.

Intestinal Parasites.—Prof. Cobbold marshals a considerable amount of evidence to show that colic in horses is frequently, in this country as well as in India, produced by ascaris, strongyli, and other internal worms. Over 1,200 ascarides he mentions as having been removed in a post mortem examination of the intestines of one unfortunate horse. It is a pity we have no record of the sensations, the gastric arrangement, the thriftness of appearance of this much-afflicted animal. What an amount of food these voracious vermin must have consumed from the irritated intestines; rolled in masses, as they often are, they must frequently have formed an almost hopeless obstruction. Thankful would that wretched victim be to suffle off his mortal coil.

Breeding from Unsound Horses.—A. A. says, in the *Country Gentleman*, in answer to an inquiry: Several years ago a neighbor of mine owned a stallion that had the stringhalt, and many of his colts had the stringhalt while following the following the mare; many more of them would be troubled with it after they had been used a short time, and I think the colts, when kept to breed from, were more liable to have the stringhalt than those bred from a sound horse.

The Press of the Day.

We should not forget that the press is the greatest educator of the day, and, more than any other instrumentality, gives caste to individual and national character; and we should remember also that this influence imposes a corresponding responsibility upon us. To meet this heavy and far-reaching responsibility, and to make the press the palladium indeed of American liberty, the elevating lever of our advancing civilization, it must have a moral conscience, and an unyielding spine. Its influence and patronage must be withdrawn from the market. It must love the right and determinedly stand by it. It must be used no longer as the tool of demagogues to foist them to office. It must break its league with a remorseless money power, and no longer assist it in plowing its schemes of fraud through legislation. It must turn away from charletans and impostors and refuse to longer recommend them through its columns. It must stand as a faithful guardian of the rights as well as the trustworthy monitor to the minds of the people. And upon the appearance of harm, be it from an open foe or an insidious evil, it must have the courage to give faithful warning to the people, and strike telling blows for humanity and the right. To do this, we shall be called upon to thin out our advertising columns, and for a short time our subscription list may be cut down, and our revenues greatly lessened, so that some of us may have to exchange the quill for the hammer and plow handles, but it will be well; our country will have been saved, and humanity entered upon the ascending note.

We repeat, then, the great want of the American press to-day, is conscience and backbone.—*Oregon Cultivator.*

Science of Money Briefly Stated.

Under the above broad title, the publications of the New York Mercantile Journal Company, (viz: The New York *Mercantile Journal*, the *Dry Goods Journal*, the *Druggists' Journal*, the *Hardware Price Current*, and the *Grocer's Price Current*,) are actively bringing the following apothegm to the attention of the public; claiming that the adoption of the system of finance therein set forth will prevent both inflation and undue contraction, thus removing all liability to monetary panics, such as in years past have so seriously disturbed the entire industry of the whole country and entailed such fearful loss upon all.

"In the interchangability (at the option of the holder) of national paper money with Government bonds bearing a fixed rate of interest, there is a subtle principle that will regulate the movements of finance and commerce as accurately as the motion of a steam engine is regulated by its "governor." Such paper money tokens would be much nearer perfect measures of value than gold and silver ever can be. The use of gold or other merchandise as money is a barbarism unworthy of the age."—*Wallace P. Groom.*

Horticulture.

Gulf Coast Fruits.

TROPICAL FRUITS.

INE-APPLE *(Bromilia Ananas)*. This delicious tropical fruit, which can only be enjoyed in perfection when allowed to ripen on the plant, has been cultivated with considera- success on the small islands and eys" near the extreme south and ntwest edge of Florida, more particu- ly in the neighborhood of Key West. e pineapple plant is very easily propa- ed, comes rapidly into bearing, and y be made a source of very considera- trade and profit when its culture is ended to its utmost limits. It must remembered, however, that it is ictly a tropical plant, not capable of luring even the slightest frost; and t it can only be grown south of lati- de 40°. Properly organized colonies, small communities possessing the uisite capital and energy, could easily ke the pineapple culture, in south and thwest Florida, a certain success; but retofore the remoteness of the most orable localities from all commercial ilities—the difficulties attending trans- rtation—and the almost total lack of cial, religious and mail privileges, ve deterred immigration and operated ry seriously against isolated individual ort in this promising enterprise.

Banana *(Musa sapientum)*, and Plan- n *(M. paradisiaca)*, both ripen their licious and wholesome fruit somewhat ther north, and stand a little lower gree of cold than the pineapple. Wher- er the mean temperature reaches 70° 75° Fahrenheit, the banana and plan- n can be raised very profitably; but se plants will thrive and fruit ripen, h a slight protection, where the mer- ry descends to 45°, or even lower. king this allowance for superior hard- ss, and extending the range of the nana at least one degree north, the eeding remarks touching the culture the pineapple will apply to the very olific and healthful fruit now under r notice. It will be remembered that e great Humboldt calculated that, in proper clime and under favorable cir- mstances, the yield of food from the nana when compared with wheat was twenty-five to one; and he also assert- that no plant grown on earth for hu- n food could at all compare with this rticular tropical fruit in combined pro- ctiveness and nutrition. There is a de field for the profitable culture of e banana on the Gulf Coast of Florida, ere it is a perennial plant, at all points uth of latitude 29°. It also very fre- uently produces ripe fruit much farther rth, as in the city of New Orleans; and metimes, when slightly protected, on e coast of Mississippi, Louisiana and xas, where the plant is very generally ltivated for its highly ornamental ap- arance and beauty. As a sure and re- able fruit-producing plant, however, the nana can only be recommended within e geographical limits above mentioned namely, near the Gulf Coast, and south latitude 29°.

The Cocoa Nut *(Cocos nucifera)*, the ate Palm *(Phœnix dactylifera)*, the uava *(Psidium)*, the West Indian Paw- w *(Carica Papaya)*, the Anchovy Pear *irius caudiflora)*, the Alligator or Avoca- o Pear *(Laurus Persea)*, and possibly her tropical fruits are cultivated to a mited extent, both for use and orna- ent, at the extreme end of the Florida ninsula, in the gardens at Key West id its neighborhood, but as yet, so far as I am aware, none of these fruits have been planted there on a large scale, nor attained any commercial importance.

SEMI-TROPICAL FRUITS.

Sweet Orange *(Citrus Aurantium)*. This almost universally-known and favorite fruit ranks deservedly at the head of this list, and is worthy of far wider and more careful culture than it has yet received among us. We can cultivate successfully every variety of the sweet orange known in America; and it is an important and noteworthy circumstance, that the seeds of the sweet orange from the West Indies, Southern Mexico, and other tropical countries, when planted on the Gulf Coast produce fruit far superior in size and flavor to that which we import from those countries or from Europe. This now well-established fact, and the ease and certainty with which fine native seedling orange trees can be produced, should encourage our people greatly to extend the propagation and culture of this noble fruit—this "golden apple of the Hesperides"—to its extreme northern limit. I find it quite difficult to define these limits with much accuracy; having seen and eaten fine oranges grown on the Atlantic coasts of South Carolina; in the northern interior of Florida; near the southwestern edge of Mobile Bay (north of latitude 30°), and at all points along the Gulf Coast, from the border of Alabama to Galveston, in Texas. The immediate shore or margin of the Gulf Coast—the islands of the Gulf sufficiently elevated to escape overflow and protracted submergence in severe storms; and the banks of the rivers, bays and bayous emptying into this great Gulf of Mexico, embrace thousands of acres perfectly adapted to the culture of the sweet orange and many of its congeners. Throughout the whole of our mild and pleasant coast country, there are numberless locations yet unoccupied and easily attainable, where almost the entire *citrus* family; from the delicate little Mandarin to the huge Shaddock, may be raise in great perfection, and with nearly as much certainty of a regular crop, as any other variety of fruit which we cultivate. It affords me much pleasure to assure the Society that the propagation, growth and culture of this most interesting and profitable family of fruits is steadily increasing from year to year; and has of late only been retarded by the great and peculiarly embarrassed condition of our section. The variety of orange most in favor and cultivation with us has generally been raised from seed, either native or foreign, and is designated and known as the Creole orange. We have also in cultivation, to a limited extent, the Brazilian (*C. Braziliensis*), the Mandarin (*C. nobilis*), the Tabasco (*C. Mexicana*), the Seville (*Brigaradier*), sour or bitter, the Shaddock (*C. decumana*), the Pamplemousse, the Myrtle, and a few other varieties. Of these, the finer sorts of Creole seedlings, the Mandarin and the Brazilian (all sweet), are undoubtedly the best and most profitable; though the most of the other sorts mentioned are valued for special purposes.

The Lemon (*C. Limonum*), the Lime (*C. Limetta* or *acida*), and the Citron (*C. medica*), are also grown to a limited extent; but all these are less hardy and vigorous than the different varieties of sweet orange, less in demand and, therefore, not so desirable.

Japan Plum (*Mespilus Japonica, Loquat, Eriobotrya*). This tree is a broad-leaved evergreen of strikingly beautiful form, and fine, free habit of growth. It is very attractive and lovely in foliage, and produces an abundance of deliciously fragrant flowers in late autumn and early winter. These, if not injured by frost (which rarely happens south of latitude 30°), are followed early in the spring, from last of January to middle of April, by profuse clusters of fruit, the size of a large plum—juicy, sub-acid, refreshing, and altogether delightful and unique in flavor and quality. This fruit may be gathered four or five days before it is fully mature—will ripen perfectly in the house or *in transitu*; and, if it were largely planted, in proper localities, could be made a source of very great profit. The most favorable localities seem to be in the vicinity of New Orleans, ranging from twenty to thirty miles above to sixty or eighty miles below the city, on the Mississippi river coast, and thence south and southwestwardly, throughout the entire region lying near the Gulf, between the great river and Eastern Texas. The Japan plum is said not to succeed well in East Florida, but I am at a loss to find any good reason for its failure there. Within the particular limits I have mentioned, and even as far east and north as Pascagoula Bay, on the Gulf coast of Mississippi, this attractive and very desirable fruit tree bears a crop three or four years out of five, and is generally grown on a limited scale, both for use and ornament.

Fig (*Ficus Carica*), What the apple, the currant, the strawberry, the Concord grape, and other every day household fruits of the easiest production are to the people of the North and West, the fig most emphatically is to us of the Gulf Coast, *the* "fruit for the million!" It grows from cuttings as readily as the grape or willow; these cuttings often producing a few ripe and edible fruit the first season, and (with proper culture) nearly alwas the second year. The tree seems subject to no disease whatever—is seldom seriously injured by frost; and, when two or three years old, always bears two, and sometimes three crops of fruit during our long season. This fruit, fresh, is of the most delicious, nutritive and wholesome quality; and may, when fully ripe, be eaten directly from the tree, or prepared for the table in many attractive forms by the skillful housewife. It is, however, mainly of the fig as a marketable and commercial fruit that I here wish to say a few very particular words. Assuming that the production of this fruit in our section, so far as quantity is concerned, is practically without limit, our next consideration is, how to preserve it in such a manner as to admit of long and safe keeping and distant transportation. Up to the present time, the fig, so delicate and perishable when fully ripe as to almost preclude the idea of handling or shipping at all in its "fresh" state, has only been cultivated and prized for home use and immediate consumption. It is true a few attempts have been made to dry figs in the sun; and our tasteful house-keepers have prepared fig preserves, pickles and confections, in many attractive forms; but thus far, with the honorable exception of one firm in the city of New Orleans, no one within my knowledge has attempted to utilize this fruit on a large scale, or render it an article of commercial importance and great profit. I think I hazard little in saying now, however, that what cotton was before the day of Whitney and his gin, the fig has been until the successful advent of Bulkley, Alden and other inventors of fruit-dryers and evaporators. I fully believe that the problem is very near its solution—that this excellent and most prolific fruit will soon assume its rightful importance among us; and that before many more meetings of this Society dried figs of Southern production will be found plentifully in our markets, and prove an important and acceptable addition to our home luxuries. The dried fig being the only form in which this wholesome fruit has heretofore been offered to the general public, it may not be inappropriate to say that our figs can also be very successfully pickled (sweet or sour), preserved in syrup, candied and crystalized in sugar, and put up in many other attractive forms and ways. All varieties of the fig, thus far tried, succeed perfectly on our Gulf Coast; and reckoning upon the value and efficiency of the most improved fruit-dryers and evaporators, there is no fruit which can be grown in our section that offers a surer or more liberal return for a moderate expenditure of capital and labor.

Pomegranate (*Punica Granatum*). This graceful and beautiful fruit tree thrives everywhere on the Gulf Coast. Of the fruit-bearing we have three or four varieties, and at least as many ornamental sorts. Both fruit and flowers are very beautiful and attractive, and the pulpy seeds of the former, when prepared with sugar like the northern currant, furnish a juice sweet, cooling, refreshing and agreeable, especially in the sick room. This juice is also used for jellies and conserves, and has often been made into a delicate and peculiar wine. The thick, leathery rind, or outer skin of the fruit, and the bark of the roots, possess very marked astringent and anthelmintic properties, and have frequently been used in medical practice with good results. The pomegranate, however, aside from its great beauty, and the uses to which I here advert, does not possess much attraction as a popular fruit for the market or dessert; and can only be recommended for limited cultivation.

Olive (*Olea Europea*). We have several varieties of the olive, including one wild, native sort (*Olea Americana*), a pretty broad-leaved evergreen, bearing a small fruit of no value. The European olive tree grows freely and luxuriantly, wherever properly planted and cared for; but its fruit production is not generally satisfactory. The dry uplands and rocky ridges of the interior are, doubtless, better adapted to this fruit than the low, moist, sandy lands on the coast; and, as the olive can resist a much lower temperature than the orange, it may be tried successfully in the more elevated and hilly portions of our Gulf States.

Jujube (*Zizyphus sativus*). This tree is a native of Syria, but flourishes everywhere on the Gulf, and as far north and east as Raleigh, North Carolina. The tree is of medium size—sometimes twenty or thirty feet high—with alternate and singularly tortuous branches, armed with long, curved thorns, and having very glossy and beautiful dark green leaves (deciduous). The fruit, which ripens in July and August, is about the size and shape of an olive; and of a sweet and pleasant taste, somewhat similar to that of dried dates. There is little doubt that the Jujube (sometimes called Jujeb) is the true Libyan Lotus of Herodotus, 4, 177, and that it is also described as the Lotus by Pliny, among the ancients, as well as Shaw, Desfontains, Beechy and Park, among modern travelers. It is the Seedra, of the Arabs, and was formerly much cultivated in Southern Europe, and the fruit use for the making of a mild kind of wine or mead, and the well-known jujube paste. Of late years, this once popular confection has been replaced by a cheaper preparation of mucilage and sugar, and the culture of the fruit has greatly fallen off. It is a very pretty and attractive fruit tree and deserves a limited share of attention.—*Extract from address by D. Redmond before the American Pomological Society*, 1865.

The Centennial.

A Look at the Centennial Exposition.

A wonderful collection of the products of human industry and art is now open to the world's inspection at Philadelphia. We have seen most of the great exhibitions in Europe since 1852, and we do not hesitate to say that this display by far exceeds them all. It is not, however, intended to state that in every particular the Centennial excels; for in works of art, in the number of rare paintings, and in statuary, it is comparatively weak; but in the display of mechanical devices, textile fabrics, products of iron and coal industries, chemicals, agricultural products, etc., it is far in advance. And we are not alone in this view. Our visitors from other countries, those who express candid opinions, fully coincide in the estimate we have formed of the display. Its magnitude is immense, the variety bewildering. As regards expense, it will be safe to say that the cost of cases and devices and appliances for the display of articles by exhibitors cannot be less than two millions of dollars, and it may be twice this sum. The costliest woods, metals and glass are used which the world can furnish, and the most skillful artisans have been employed in planning and constructing these receptacles for the thousands of curious and wonderful substances and devices brought together. No estimate can be made of the value of the exhibits, even approximating towards the truth; but the wealth in kind is unquestionably larger than was ever before brought together.

The natural products, the industries, the inventions of our country are represented as they never were before, and it is the first time they were ever fairly brought in contrast with those of the Old World. The international contributions are unexpectedly large and complete, and it is gratifying to know that every civilized nation on the globe, with three or four exceptions, is represented. Greece does not appear, and there are several of the petty South American states that occupy no space. England would naturally be, next after us, the largest exhibitor, and it is apparent to every one that she is. The mother country has done grandly in her display, and has sent to her children in the west a vast amount of her industrial and art treasures for examination and study. Every step taken through the large space occupied by England brings the visitor to new objects of wonder and delight, and thousands every day linger around the well-filled cases in this department. The French, Belgians, Germans, Russians, etc., all do well, and their products individually are worth a visit to Philadelphia to see. So fully have the nations of the earth responded to our invitations that it is impossible in the space at our command to allude to even the prominent articles which are open to inspection. Not only the leading nations of Europe command our attention, but those of Asia, Africa, South America and Australia. Even so far-away and little-known countries as the Orange Free State in Africa, and Tasmania in New Zealand, have joined in the grand concourse of nations The Sandwich Islands make a most interesting display, especially in their volcanic products. We have never seen more wonderful specimens of lavas, sulphur, and natural crystalline substances than are here arranged.

It is impossible to repress a smile as one passes into the Japanese department. They are unquestionably among the shrewdest and most ingenious people in the world. They have brought to the exhibition some of the most delicate and beautiful bronzes and lacquered wares ever made by human hands, and they have done this, not only to gratify a laudable national pride, but also with an eye to business. They seem to us to be a people wonderfully self-reliant and intelligent, and fully ready to open up to trade the great American markets. In connection with their exhibits, they intend to "open shop" outside the grounds and doubtless a thriving business will be done. The Chinese surprise every one with the extent and richness of their display. In elaborate and skillful carving in wood and ivory they lead all other nations. Their department is now fully opened, and visitors are inclined to linger long among the extraordinary products of Chinese skill. The Russians have been tardy in arranging their articles, and at the time of our visit their section was in a state of confusion. Enough, however, was open to indicate the unsurpassed richness of the malachite goods which they have brought to the exhibition. But it is not our purpose to enter upon any extended statements regarding the exhibition in general. Almost every newspaper in the country has its special correspondent at Philadelphia who, during the summer, will describe in detail all the wonders of the exhibition so that every reader will be fully informed.

If any one supposes that the Agricultural Department of the great exhibition at Philadelphia is devoted solely, or larg-ly, to a display of agricultural implements, and that the eye of the visitor is to be wearied with piles of freshly painted mowers, harrows, plows, etc., he is greatly mistaken. We regard the agricultural building, with its contents, as one of the most interesting of the group, and alone it is worth a trip to Europe to see. Every live, intelligent farmer in the country should contrive in some way to visit this display. More can be learned by a careful study of the seeds, plants, tools, agricultural products etc., which are here brought together from all parts of the world than in any other way. A farmer in middle life will find enough to supply food for thought for the rest of his days.

The acres of area covered by the graceful roof of the agricultural building are laden with the fruits of the earth from every clime, and the elegance of the designs of cases, rooms, etc., and the costliness of the products, astonish every visitor. Take the display of the single State of Iowa, under the management of James W. Fulton, Esq., of Fairfield; what a vast variety of wonderful products is here brought together. The fruits are all represented in wax, and are exact models of fruits produced in that State last season. These wax fruits are works of art in form and coloring. The seeds are shown in vast variety; enormous stalks of the cereal grains, with the golden ears of corn hanging in ponderous masses from the walls afford a pleasant sight to the eye, and the collection affords a complete exhibit of the earth products of that garden State. The same may be said of the exhibits of the other States and countries.—*Boston Journal of Chemistry for July.*

CENTENNIAL OF THE AMERICAN REPUBLIC.—Henry Channing Beals, editor of the *Com. Herald*, San Francisco, says:

In the history of nations the passage of a hundred years has seldom determined results which leave their impress upon mankind for all coming time. None has been so pregnant with great events, none so replete with salutary experiences and human progress as that which terminated with the Fourth of July, 1876. The mere enumeration of its wondrous achievements would require volumes of research in every department of science, art, literature, discovery, invention, political economy, emancipation from tyranny, from religious persecution and bigotry, the propagation of republican principles founded on the inalienable rights of the individual, and a host of other subjects indicating the mastery of mind over matter, the control of knowledge over ignorance. Put for the existance of this great republic, it is questionable whether the now indispensable services of steam, electricity, and their cognate elements of strength and dominion, would have been brought into requisition. This country has been, and is, the great iconoclast of the world, breaking down and destroying the idols that held nearly the whole habitable globe in the bondage of subservience to arbitrary rule, and social and political inequality before the law. Its grand declaration of principles which underlie the whole fabric of personal independence and freedom, and its steadfast adherence to the terms of that declaration, have commanded the confidence and respect of the nations, the love and admiration of the good and worthy, everywhere. The priceless boons bestowed by Providence through the agency of the United States belong equally to all the world. We have called the world to unite with us in grateful recognition of what it has received—and the world has come! It remains for us, on the western confines of this great republic, to participate fully, cheerfully, grandly, to the extent of our power, in the effort to celebrate the Centennial Anniversary of our country's birth in a manner commensurate with so august an occasion. It will infuse into the minds of those who come after us the eradicable determination to stand by principles that have blessed the whole human race.

FLOWERS AT THE CENTENNIAL.—The horticultural grounds and exposition of the Centennial comprise forty acres, covering the whole of a sugar-loaf hill, located near the center of the exposition inclosure. All the United States trees are represented, and the plants recently introduced from China, Japan and the East. The space reserved for the display of ornamental gardening contains about 70,000 flowering, and perhaps as many foliage plants, arranged in the carpet, bed, ribbon and geometric style of gardening. The building, exclusive of the main hall, and the four greenhouses, is divided into several compartments for the individual exhibits of florists and gardeners. On the north and south sides are the two greenhouses, each thirty by one hundred feet in size. These and the main building are heated by hot water, for the exhibition of choice plants of commerce, tropical and other exotic productions. The main hall, eighty by two hundred feet in size, is ornamented by a handsome marble fountain, surrounded by statuary and specimens of the ceramic art. The heating of this large building is effected as follows: Four large return flue-boilers placed in the basement of the main hall, connected by iron pipes lain underneath the floor of the passage-way, conveying water to and from the boilers, and, propelled by heat, the water moves throughout the building disseminating a genial and uniform heat everywhere.

Subscribe for the AGRICULTURIST.

PARIS GREEN is very widely used for destroying the Colorado potato beetle and the cotton worm. Its brilliant color is likely to prevent accidents from mistaking it for something else. Dr. Kedzie estimate that more than a hundred tons were used in one year in the State of Michigan. This extensive use brings up the questions, Will it poison the plants, and render crops unsafe as food? Will it poison the soil and injure succeeding crops? Will it become washed into drains and poison springs and wells? What becomes of it in the soil?

To answer the first question,—cabbage plants were watered with a saturated solution of arsenic, and were killed in a week, but the leaves did not contain a trace of the poison, except by a discoloration of the stem near the roots. When the solution was weaker, so as not to injure the plant, the slightest trace could not be discovered anywhere. The experiments were repeated on barley and on turnips. Again, they were tried on peas, all with the same results. Dr. Kedzie says: "Four years ago, I made a careful investigation to determine whether the potato tuber absorbed arsenic when Paris green was applied to the plants to destroy the potato beetle. I took potatoes raised in the ordinary course, and repeatedly dusted, and others to which all the Paris green had been applied that could be used without killing the plant; but in no instance could I find a trace of arsenic in the tubers. Other chemists have made similar investigations with the same results."

WITHOUT agriculture there is no wealth. Gold and silver are not wealth, they are its convenient representatives; commerce produces no wealth, it simply exchanges it; manufactures and the arts combine it. Agriculture is the prolific mother of wealth, the rest simply handle it when produced and delivered into their hands.

The earth breeds savages; agriculture breeds enlightened nations; it breeds houses and ships, temples and seminaries; it breeds the manufactory; sculpture painting and music are its offspring. The wheels of the workshops, the sails of commerce, the implements of science, the pen of genius, the pencil and chisel of the artists, the eloquent tongue of the orator, the scheming brain of the statesman, the equipages of wealth, the banquetings of pleasure—all that renders earth in its tides of life anything but a great sepulchre, move and have power of being because the fields yield their fruits to the patient toil of the husbandman.

We might manage to live without merchants, without mariners, without manufacturers, without orators, without poets, perhaps we might possibly survive the loss of demagogues, but sure I am we could not live without plowmen.

The state of husbandry in any country is the best test of its enlightenment. The thermometer of civilization rises or falls as drives the plow. You must send the plow, exclaimed a man who had traveled all over Christian missionary ground in heathen lands; a barbarian nation needs but to be plowed up, deep subsoiled, sowed, planted, and the inevitable harvest will be an enlightened nation.

AN Englishman visiting Sweden, noticing their care for neglected children, who are taken from the streets and highways and placed in special schools, inquired if it was not costly. He received the suggestive answer: "Yes, it is costly, but not dear. We Swedes are not rich enough to let a child grow up in ignorance, misery and crime, to become afterward a scourge to society, as well as a disgrace to himself."

Women.

Blanche and Nell.

O, Blanche is a city lady,
Bedecked in her silks and lace;
She walks with the mien of a stately queen,
And a queen's imperious grace.

But Nell is a country maiden,
Her dress from the farmstead loom;
Her step is free as a breeze at sea,
And her face is a rose in bloom.

The house of Blanche is a marvel
Of marble from base to dome;
It hath all things fair, and costly and rare,
But alas! it is not HOME!

Nell lives in a lonely cottage,
On the shores of a wave-washed isle;
And the life she leads, with its living deeds,
The angels behold and smile.

Blanche finds her palace a prison,
And oft, through the dreary years,
In her hardened breast there is sad unrest,
And her eyes are dimmed with tears.

But to Nell her toils are pastime,
(Though never till night they cease,)
And her soul's afloat like a buoyant boat
On the crystal tides of peace,

Ah! Blanche hath many a lover,
But she broodeth o'er old regret;
And the shy, sweet red on her cheek is dead,
For the day-star of hope has set.

Fair Nell! but a single lover
Hath she in the wide, wide world:
Yet warmly apart in his glowing heart
Love hides, with his pinions furled.

To Blanche all life seems shadowed,
And she but a ghost therein;
Thro' the misty gray of her autumn day
Steal voices of grief and sin.

To Nell all life is sunshine,
All earth like a fairy land,
Where the roses grow and the violets blow,
In the softest breath of God.

REFORMATION AND DISCRIMINATION.

BY DORATHA.

I ATTENDED a meeting for the reclaimation of fallen women. One of the speakers, in the fervor of his feelings, exclaimed, "Is there any character on the earth so degraded, so near the gaping pit, as the abandoned woman?"

The sentiment was applauded, and no one answered, "Yes, yes, the seducer!"

A thousand times lower—a thousand times more to be despised is the man whose smooth dissimulation, cunning intrigues and deceitful suavity lead innocence and virtue to prostitution.

And yet, strange as it may be, people, virtuous people, seem not to think that the depraver of woman is himself depraved. Until the seducer can bear his share of the shame—until society visits on his head an equal share of the disgrace that weighs down his partner in guilt, our cities and towns will be thronged with his degraded victims.

But how are the facts? A man, the notorious corrupter of innocence, may reform, or pretend to reform, become an influential member of a church, and be received in society as an honored guest. He may not even reform. He may notoriously continue in his wicked ways; and yet, if he has money, or position, or talent, there are not a few who welcome him into the fashionable circle; and polite and accomplished ladies who will not blush to be seen walking with him in the streets—who will even invite him into their parlors and delight to do him honor are not few.

Is this right? Is not the seducer's victim as fit for the favors of society as he? Should the one be loaded with honors—be caressed and fawned upon, while the other, even when penetent and reformed, is spurned and spit upon, denied admission into Christian churches, driven back by the force of public sentiment into the company of her former associates of the brothel,—virtually compelled to resume a life of infamy?

I ask not that the road to prostitution should be made more pleasant, or that the odium of the public condemnation should be withdrawn. But it is just that the seducer should stand on the same level with his victim and receive, at least, one half of the lashes of the public condemnation.

Household Reading.

One Touch of Nature.

My sketch was finished, and I turned to go,
Yet lingered for a minute to compare
The painted cottage in my folio
With that which stood within the landscape there.
How feeble was my picture, despite all my care.

The cotter's wife was standing at her door,
And saw her husband coming down the lane,
And, catching up her baby from the floor,
She hurried out to meet him once again,
Lavish of treasured smiles that were not spent in vain.

Their meeting all his weariness relieved;
His drudgery to merriment gave place;
Exchanging burdens, she his tools received,
And he, the baby, nestling to his face.
So went they back contented to their dwelling-place.

Weak was my sketch, and weak the matchless hue
Which nature shed around on land and sea,
Beside the beauty of affection true
That simple meeting there revealed to me.
Nothing on earth with human love compared can be!

DOTTINGS AND JOTTINGS.

BY PROF. ISAAC KINLEY.

OPEN the windows—open the doors, and let the sunshine in! See that cold-blooded man, the thermometer of whose affections never rose above zero. He loves no one, and none loves him. He enjoys no smiles nor even the sad luxury of tears. A living embodiment of baseness, his emotions are only appetite, and his aspirations only for self-gratification. He belongs to the race of reptiles, and has crawled on his belly all the days of his life. A lingering relic of the saurian period, he fairly hisses at the smiling faces as they pass.

The rose is queen of flowers not more for her beautiful colors than her sweet odors; and the human face divine is loveliest when radiant with the goodness of the heart. It is no less the affections than the intellect that raise man above the brute—that exalt him in the scale of being.

Reason, indeed, is noble. Between it and the affections there should be no invidious line. These are the heat-rays giving warmth where that does light. Love and reason are correlatives, and the two, as one, only can be beautiful or great.

Reason alone is an arctic day, bright but cold. Reason and the passions are the tropical tornado, leaving only ruin in its train. Reason and the affections are the fair summer's day, with its verdant valleys and fruitful fields.

If life is a winter, and the north wind blows, and chills, and freezes; if the flowers of love and hope wither and die before their leaflets have unfolded, it is that the blasts have not been warmed and gentled by the soft south winds of human affection.

Nature is reciprocal, giving kind for kind. Where the warm winds blow the leaves unfold and the flowers bloom. Who gives love, love receives, and is the happier and nobler for his giving.

If there were more of sunshine and less of wintry darkness in human life, how infinitely better it would be for mankind! Reader, open thou the windows and doors of thy soul and let the sunshine in.

We cannot become wise in a day, but we can resolve to do so in a single hour; and, if we heroically carry out the resolve, we shall from that time forth grow in wisdom, gradually passing from littleness into greatness.

We cannnot, in a single day, form a perfectly beautiful character; but we can resolve to do so in a single moment, and we shall instantly begin to leave off habits of evil, habits that deform, habits that degrade; and start in the growth of all that is morally good and intellectually great—we shall begin the formation of a character worthy the admiration of angels and men.

Who climbs Mt. Hamilton begins at the base; but with every step upward the horizon enlarges and beautifies. The summit attained, there lies before him, as far as the eye can see a panorama of mingled beauty and grandeur. There, too, will be placed the telescope, through whose philosophic glasses the very heavens seem nearer.

The road to knowledge leads upward. With every step the intellectual horizon expands. And as we ascend higher and higher, the enlarged prospect becomes the source of continual enjoyment.

True culture does not consist alone in extending the range of thought, or in strengthening the powers of the intellect. The educator should remember that man is a moral and social, as well as an intellectual being. The duties of life should be studied; and, even though they be disagreeable ones, the mind should be educated up to the cheerful acceptance and heroic performance of them.

What though the mind be able to grapple with the most difficult questions of philosophy—what though the imagination can soar to empyrean hights—if the moral nature be not developed, if the love of truth and justice and right be not educated into a sentiment, the man with all his learning is only a degradation.

The scion from the root of the tree that has been only cut down grows often with more vigor than the parent tree itself. The evil tree of human slavery should be taken up by the roots and burned in the fire.

The spirit of slavery is not dead. It has raised its foot indeed from the necks of the black race in order to place it the more securely on all races.

See those immense monopolies that tax the resources of the whole people in order that the few may become millionaires! See the corrupt rings that control legislatures and administrations, state and national, for the purpose of swindling the people and gathering to themselves wealth and power! See all over this land the hateful spirit of aristocracy spurning honest industry and honoring only idleness and luxury!

Think you that slavery is quite dead? Think you that this upas tree has been taken up by the roots?

We are all cowards—moral cowards. We dare not openly avow our convictions. We can face the cannon's mouth —we can stand with unquivering nerve where the death-shots are flying thick as hail about us; but in the face of the multitude shouting "Yes!" how few of us have the courage to say No! even in a whisper, though our convictions be ever so strong!

In the long struggle against slavery, it was not that the world had to be convinced that slavery is wrong. This all know by instinct. It was that the moral courage required to be educated up to the standard of accepting a title which an ignorant prejudice had rendered odious.

Man, in all his faculties and powers, is hereditary. We are the children, not of our fathers and mothers only, but of our ancestors for a thousand generations back; and the parents, not of our children only, but of their descendants for endless ages to come.

Our tendencies to virtue or vice, to strength or weakness, to health or disease, are transmitted; and it is not ourselves alone whom we elevate by our virtues or degrade by our vices. The forces go on, often to be greatly exaggerated as they descend.

The desires of the parent may ripen into action in the child. The aspirations for a better life, which, at times, even the bad man feels, may be an inspiration of positive virtue in his children, or his children's children. The parsimony of the parent which only covets the property of another, developed into a ruling passion in the child or grandchild, may take without asking consent of the law.

Thus God visits the iniquities of the parents on the children, not to the third and fourth generation only, but to the tenth or twentieth. The evil meditations of a man may send his grandson to the gallows.

It is early day, and yonder lies a fellow whose couch for the night has been the bare ground. Between comfort and appetite he chose the latter, and gave the price of a bed for last night's carousals.

Well, what else? Pity him? So I do. Give? So I would, were it wise, or just, or beneficial.

The dollar in my pocket has cost me toil, and I have a right to whatever of comfort it will buy. But, if I am not a niggard, or a villain downright, there is a real pleasure in relieving want.

The quality of mercy is twice blessed,
It blesseth him that gives and him that takes.

But if the gift is only a curse to him that takes, there is no mercy in the gift nor blessing in the giving. A dollar to him will only purchase another night's carousal. Go your way, besotted man, and hunger into soberness.

Poor fellow! He trespasses and suffers the penalties. The way of the transgressor is hard.

It is not pride of character, but the want of it, that withholds an apology for an insult given or an atonement for an injury done. He who really values his character will hasten to remove even the slightest stain. We sometimes hear of persons too proud to apologize. We should rather say, too weak, or too vain. The really noble person cannot rest quiet on his pillow with the consciousness of an unatoned wrong against another. The gifted Crittenden did many things to endear himself to the American people; but nothing which places his character in a nobler light than his rising in the Senate and, with tears in his eyes, apologizing to Mr. Seward for undeserved words spoken in debate.

All capital is the product of labor. Should not the creator of wealth have, himself, enough of it for the needs of

life? It seems just that he should. It is hard that the woman who makes your clothes should herself and her children go in rags; and not just that the proceeds of her labor should make a millionaire of one who only passes her work through his hands to the purchaser.

The remedy is in the hands of the laborer himself. Co-operation is the key to the wealth of the earth. Justly and wisely used, it will give to the laborer the profits of his own earnings and supply, in abundance, the comforts of life to every one who will give his labor to obtaiu them.

San Jose Institute, July, 1876.

EACH HAS A WORK OF HIS OWN TO DO.

ED. AGRICULTURIST: I have read considerable in your paper from the pen of "Rachel A. Ely." I have no fault to find with most of her "Up-Country Letters"—I feel rather like encouraging her in her solicitude for our health—many things she says are really good and praiseworth, but I want to criticise, good-naturedly, a few of her remarks. In the first place, I am surprised at the production of such letters by an invalid. If she is, or has been, the sick woman she claims to be, her writings seem to me to almost refute some of her arguments. The physical weakness, according to her showing, would be inconsistent with the mental strength her "Up-Country Letters" exhibit. Am I right? Or are the conclusions she draws from her premises wrong, and the result of a debilitated physical system working a corresponding feebleness of mind?

"Rachel" has a good deal to say about ministers and Christians. They will bear criticising, truly. But if she has not heard "the good pastor" urge the necessity of obeying God's physical laws, as she tells us in a late letter, she certainly cannot have listened to many pulpit discourses. I have frequently heard very able and earnest exhortations from ministers to their congregations on this subject. And it is right. It is as siuful to violate a physical law as a moral law. Nay, I am not so sure that we can break a physical law without violating a moral precept in the same act, or its consequences. But the preacher does not directly, and continually, combine the physical with the moral obedience, it should be remembered that he has enough to do, in looking after the spiritual interests of his people, to occupy all his time and ability. It does not do for one man to be everything.

Letter No. 5 wonders why they "don't take up the good tidings of obedience to God's physical laws with the moral and spiritual, combined." Why, bless you, they do; but they do not advocate obedience to the physical laws to the extent that would amount to the abandonment of their higher and more specific work. And for this we should quarrel with them. My eye does not complain of my ear because it does not do the seeing; and yet seeing is as important as hearing. Neither does my mouth find fault with my eyes because it is left to do all the eating and speaking; yet eating is more necessary than seeing. You say each organ has its own work to do, the faithful performance of which relieves it from all further obligation. True. Just so the minister has a work of his own to do. Let him attend to the duties of his spiritual calling, and some one else look after our physical welfare. Either work will be enough to engage all the time and faculties of any one individual. Divide his attention, and he will be inefficient in his performance of both duties. Let the eye see, the ear hear and the mouth eat and speak, and all work in harmony, for a common end, and perfect service will be rendered and perfect results follow.

We are social beings—all more or less dependent upon each other. We each have a work to do. The faithful performance, by each, of his particular duties constitutes our individual and common happiness and well-being. Go on with your efforts to enlighten the public mind on health topics. It's a commendable mission, and I say Amen! to it. We need it. But let others carry on their part of the work of elevating, ennobling and happifying our race with like peace. Remember the truth of my subject—"Each has a work of his own to do."

Yours, P. F. P.

REPLY TO "GIRLS' RICHTS."

In every family there is abundant scope for both masbuline and feminine supremacy without their clashing with each other. It is only with the masculine, however, I have now to do, and I call your own attention to the fact that when "masculine supremacy" is duly observed in its legitimate sphere, you have there found always the most happiness. Such is the result of my own observation, Where is the wife who does not love her husband the more for being able to confide and trust in him, to lean upon, and look up to him in all cases of emergency? If I have read nature right, this is an inherent quality of the feminine mind. Look at the effects of setting aside this supremacy in the Gewcloit case. Did it not generate contempt and finally worse, hatred, even to bringing about divorce? On the other hand, you cannot but have observed the good results of that decisive negative to the wife's request for a better house, a new buggy and improved style of living altogether. This would have brought debt, and probably mortgage. The good husband, S., took this request most kiudly, and kissing his wife relied, "No, darling, we must wait a while, and see what another crop or two will do for us." You may find other cases exactly parallel to this, all resulting from adhering to, or setting aside this criticised sentiment, "masculine supremacy."

As for the home institution, be it observed it is a farm with its appurtenances that the wife comes to, and not a millinery institution. "So far as I understand it," it is to the husband's home the wife comes—when he is so fortunate as to have one—and "he only is competent to judge" whether they shall live at the rate of five thousand a year or one thousand.

May "Girls' Rights" have opportunity of trying it, and say yes or no, as her good judgment dictates.

GRANDPA.

UP-COUNTRY LETTERS---NO. 7

BY RACHEL A. ELY.

Oh! the beauty and holiness of nature! Her laws, how divine and perfect! the obeying of which brings continual joy and blessings. It is disobedience to them which brings suffering, ruin and premature death. Surely her laws must be God's laws, and to know and follow them the divine light given us, whether moral or physical laws. Are not both equally sacred in His sight? Can the mind be as strong and active when the body is weak and sickly, I wonder? I will think it over. And another query is, why don't our clergy and teachers combine the teaching of physical laws with the moral and spiritual.

My experience goes to prove that as I gain in strength (which I am doing daily) I grow mentally, morally and spiritually stronger. My blood and brain seems tingling with the love of God's beauties, and a desire to help the poor, weak creatures who are suffering to arouse themselves and study His laws and obey them, rather than to put themselves into the hands of an M. D., and attempt to get well in spite of broken laws and wrong doing. Ah, well! the world moves slowly, and it takes years to make a perfect tree even, so I fold my hands and sit and dream of a future that I shall never see, perhaps, but a future that must surely come to this planet of ours.

When will we *do right* from the *love* of it, not through fear or because it is the best policy? When will we rightly understand the laws governing our health, so that we will not only keep well, but bear healthy children—an inheritance few give their offspring?

I have returned to my quiet, serene quarters once more—a sister of the sick woman's husband having come fifty miles or more to remain until the slowly returning strength be fully established. Like most Western women, she is ready to do anything that appeals to her common sense, even though the ideas be new and somewhat radical, so my hostess finds little difficulty in having her orders entirely carried out. And as recovery seems certain, though slow, the husband begins to think a little in his quiet moments, asking questions, and has subscribed for a health journal. The doctor who gave up the case still drops in, rubs his fat hands, and is glad to see *his patient* gaining!

My hostess is a puzzle to me continually—seemingly so quiet, and yet living her life so truly—making all circumstances conform to her ideas of right, so that one is led to think it is easy so to live. But she and her husband both say they have had their years of trials, and *now*, having determined on a certain direct course, which they know to be right and best for their children and themselves, all is plain sailing—only they must row their boat alone, single-handed, and be oftentimes misrepresented and abused by the world and neighbors even. But we all have our burdens, and theirs is small compared with many others.

I take a walk daily among the wild flowers and waving grass and forest trees, and feel refreshed by the sun, instead of weaker, as at first. We women do not get enough of the sunshine on our bodies, my good friend says, and I begin to believe its truth. At first I felt utterly *wilted* by its heat and power, but continuing daily to take my noonday nap beneath its glow, I found myself receiving renewed vigor and spirits. The hum of the insects and singing of the birds lull me to a calm repose, such as has not been enjoyed for years before. Try it, O ye invalids! and see its magic! Make two calico wraps and go to the mountains; leave finery and society and civilization behind you. Return to simple habits, plenty of coarse bread, fruit, vegetables, eggs, butter, milk and spring water to drink and to bathe in, sunlight to walk and to sleep in, and mountain air to breath. With no worry of mind, return to childhood again and see if you do not begin to feel *red* blood throbbing through your veins and filling your heart with future resolves of right doing, and withall a deep pity for all the sick and weary ones who daily drag life's burden, with no hope but the grave as a release.

Acts are only thoughts matured.

Boys and Girls.

The Child's Centennial.

BY MARIAN DOUGLAS.

Around the purple clover-flowers
The butterflies were flitting;
And on a stone beside the road
A little boy was sitting.
The fragrant air his yellow hair
Around his face was blowing,
And, down his pretty rosy cheeks,
The great round tears were flowing.
His trowsers were of coarse brown cloth;
His frock was made of tow;
For little Ebenezer lived
A hundred years ago.

Along the road, upon a horse,
Two men came, riding double;
And one spoke out, "My pretty lad,
Pray tell me what's the trouble."
But, at his friendly words, the boy
Began to sob the louder;
"O, sir," he said, "my father took
His gun, and horn of powder,
And rode away this very morn
To help to fight the foe;"
For there was war within the land
A hundred years ago.

The foremost man drew in his rein
(His horse was somewhat skittish),
And said, "My dear, I would not fear;
We hope to best the British.
And when the Yankees win the day,
And send the Red-coats flying,
And home again your father comes,
You will not find him crying;
You'll be a happy fellow then."
"Oh, that I shall, I know!"
Poor little Ebenezer said
A hundred years ago.

"But if he should not come at all,
And we should find, instead, sir,
A sword cut off his head, sir?"
"Oh, even then," the man replied,
"We'd proudly tell his story,
And say, 'He died for freedom's sake,
And for his country's glory.'
And here must be the little son
Who see father fights the foe;
We need stout hearts." And so they did,
A hundred years ago.

The man rode on, and home again
Ran little Ebenezer;
"Now I must share my mother's care,"
He said, "and try to please her;
And I must work in every way—
Rake hay, and feed the cattle,
And hoe the corn, since father's gone
To give the British battle."
Oh, looking backward, let us not
Forget the thanks we owe
To those quaint little boys who lived
A hundred years ago!

"OUR CORNER."

THE LETTER BAG.

WHY is it that there are no more letters this month? Aunt Polly hopes that her nephews and nieces are not going to "throw off" and try to forget her. Cannot you make out the answers to the puzzles, etc.? How can Aunt Polly know who has sent the best puzzle unless some are not guessed? If you don't send me the answer to such as you can find out how can I know which you cannot find out? Now, try again, and see if you cannot make out the puzzles given in June and July, and send me the answers, or else say which are the hardest. Now, write us something good and funny, for "Our Corner" must be jolly, you know.

Daisy writes a nice letter. Here it is:

Dear Aunt Polly: I thought I would tell you how I spent my Centennial Fourth of July. Papa decorated his carriage so that it looked very pretty. He covered the top of it with a large American flag, festooned it, and then trimmed it with evergreens. I invited three little girls near my age whose papas do not keep horses. We took a nice lunch, and went up in the woods. My papa put up a swing, and then mamma spread the cloth in the shade of a beautiful live oak, and we gathered aronnd it a merry little party. We had some fire-

crackers, and had a nice time making all the noise we wanted to. We were near a brook where we gathered some beautiful ferns. We saw one snake, but did not kill it. I hope all your little friends had as nice a time on the Fourth as I did. Here is a short puzzle:

My first is in lend, but not in borrow;
My second is in to-day, but not in to-morrow:
My third is in Zillie, but not in Mollie;
My fourth is in baby, but not in dollie:
My whole is what little boys and girls never should be.

DAISY G.

Tommy Clark, of Livermore, has not forgotten us. Here is a letter and puzzle he has written:

Dear Aunt Polly: The answer to Jennie's puzzle is "Aunt Polly offers premiums for the best puzzles; let us all try." I noticed that she did not use any figure two at all. I send an enigma:

My 18, 23, 33 is light.
My 31, 7, 24, 13 is to venture.
My 23, 16, 9, 8, 7, 27 is a beast.
My 3, 32, 29 is an animal.
My 4, 19, 29 is to permit.
My 32, 18, 11, 15, 14, 31 is a preposition.
My 12, 1, 29 is good to eat.
My 11, 15, 18, 24, 21 is to hasten.
My 2, 30, 29 is an adverb.
My 14, 9, 6, 25 is to whistle.
My 5, 17, 20, 33 is a whirling pool.
My 10, 26, 28 is turf.
My 24, 22, 20 is a color.
My whole is represented by one of the letters of the alphabet.

TOMMY C.

Here is another letter from Livermore:

Dear Aunt Polly: I received my chromos. I thank you for them. I love the darling little birds and chickens; nothing could have pleased me better. I was very glad to see my rebus in "Our Corner." Your niece, MARY C.

Mary sends another rebus, which I cannot give because the printer has no way of illustrating it. Such things need to be engraved on wood, and Aunt Polly is not an engraver.

Here is a whole string of puzzles sent us by "Two Californians." How many of them can you make out? First let us try the word rebus. Here it is:

Love me Love

DOUBLE ACROSTIC.

Read downwards the initials form a city in Georgia; the finals a city in Wisconsin: 1, a city in New Jersey; 2, a city in Florida; 3, an island belonging to New York; 4, a range of mountains in Asia; 5, a city in Italy; 6, a city in Canada; 7, a city in Illinois.

SQUARE WORDS.

1, a celestial body; 2, domestic; 3, an ejaculation; 1, a girl's name.

1, to peruse; 2, a girl's name; 3, a minute particle; 1, is not perfectly dry.

CONCEALED TREES AND FLOWERS.

1—Tell Ethel May wants to see her.
2—Hang up the dish-pan, Silvia.
3—I never saw such force, daring and valor displayed before.
4—Did you see that sweet peasant girl?
5—Yes. Have you copied that map, Leander?
6—No; but I will. I say, pick up that pin, Karl.
7—What! Are you sick? A more sad event could not have happened.
8—I rise early every morning and take a walk.

WORD PUZZLE.

My first is in chocolate, but not in tea;
My second is in you, but not in me;
My third is in archer, but not in frog;
My fourth is in cat, but not in dog;
My fifth is in ride, but not in walk;
My sixth is in stand, but not in talk;
My seventh is in thumb, but not in hand;
My eighth is in hat, but not in band;
My whole is a flowering bulb.

GEOGRAPHICAL ENIGMA.

I am composed of twenty-five letters.
My 5, 10, 9, 22, 23, 2, 4, 10 is a river in river in the United States.
My 4, 22, 3, 8, 10 is a river in Spain.
My 11, 20, 6, 15, 4 is a lake in Africa.
My 20, 10, 16, 35, 9 is a sea in Australasia.
My 23, 24, 7, 4 is a city in Arabia.
My 9, 19, 1, 25 is a city in South America.
My 9, 15, 20, 5, 7, 4, 19, 18, 13 are islands in the Indian Ocean
My 14, 2, 17 is a cape on the east coast of the United States.
My 3, 12, 21, 5, 15 is a city in New York.
My 3, 21, 25, 6 is one of the United States.
My whole are the given names, without the surname, of one of the Princess of Wales' children.

MISS OTTERSON'S SCHOOL.

Dear Children: I promised Aunt Polly last month to write you something about Miss Otterson and her little school and family—for she is a woman of family although a delicate invalid. Though never married, yet she has adopted ten little children, eight of whom are living to bless and repay her, I trust, for her tender care and love of them all these years. Her eldest boy is now attending the Normal School. Her eldest girl is her thrifty housekeeper, and drives the splendid team daily after the children, taking them home also. Think of that, little folks! Mustn't it be nice fun to have a ride to and from school? No tardy marks; no dusty, tiresome walk; but a brisk ride. And, ye mothers! what a relief to feel sure that the little ones have got to school safely, and will come home all right, too!

There is a new school-house being built for Miss Otterson adjoining her present house, and when that is finished I will tell you all about her school.

Her twin daughters (charming girls, about 15) entertained us with music, showing much natural talent and great perseverance. She has five girls, the youngest nearly nine years old.

Do you know, children, when I look at Miss Otterson, that I felt a reverence for that small-bodied, but large-souled woman, whose life has been a struggle, but who has filled a mother's place to so many motherless hearts? Yet this frail woman has willingly and gladly taken upon herself duties that few mothers have performed, though the joy of motherhood has paid them for all. Her example should inspire us all to do what we can to help this big human family along, making it better for the little we we can do. JEWELL.

GRANDMA'S TALKS.

Easy Lessons from Nature—No. 6.

Good morning, Johnny and little Lucy. I am glad to have a talk with you once more. What news have you to tell me this morning? That Johnny has just broken a window with his new ball. What a pity! I hope, Johnny, that you have pocket money enough left from the Fourth of July to pay for it. If children pay promptly for the mischief they do, it makes them more careful in future.

See, I have a ball in my desk here which would be far safer for you to play with, Johnny. It has a rubber string attached, which you can keep firm hold of; then see, when I throw it how nicely it springs back into my hand.

Oh! this is a girl's ball, is it, and you don't want it? Well, I will give it to Lucy when our talk is over.

Now, as I lay it on the desk, why does it roll immediately to the floor, as if pulled off by an invisible string, then after rolling a little it stops still? What starts that ball, and what stops it? Johnny says the desk is slanting and the floor is flat, and balls roll so nicely, they never stop the minute they touch the floor. But this does not answer my question. What pulls it down like an invisible string the instant it is laid on a surface not exactly level? Did either of you ever think of that before when you have had so many bumped heads and tumbles? You see, the earth is always pulling down everything smaller than itself. This force is called

ATTRACTION OF GRAVITATION,

the force that pulls everything towards the earth.

Lucy, can you lift this table? What makes it too heavy for you? Yes, the earth can pull harder than you can. So you see that attraction gives *weight*; anything is heavy or light according to the force required to overcome the attraction of gravitation.

What is the shape of the earth, Johnny? Round, like an orange; and attraction makes it this shape also. When you are older you will be better able to understand the reason.

What do you mean, then when you say the floor is flat? This is a difficult question to answer, so I will help you. Now, suppose the very moment you drop your ball to the ground here in California, some boy on the opposite side of the earth (in Africa, near the Cape of Good Hope, perhaps) drops a stone. The ball and stone would fall directly towards each other, attracted towards the center of the earth. Now suppose another boy in New York drops a stone at the same moment, it will also fall towards the center of the earth, and you three boys are standing with your feet pointing towards each other. Now each of you would call the floor *flat*, or *level*, under your feet—and why? Because, if really level, every part of the floor or ground upon which you stand is equally distant from the center of the earth. In building houses carpenters use what is called a "spirit level" to get their floor exact, so that the house will stand perfectly straight. The first time you see a carpenter building a house, I wish you would ask to see the instrument he uses to get the exact level with.

Now, you notice that my desk is made so that one edge is nearer the floor than the opposite edge. Johnny calls that a "slanting" surface, which is quite correct. If I place the ball on this slant, the earth pulls as an invisible string attached to the center of the ball, and as such a string would fall outside the little spot where the ball touches the desk, it would be pulled over and continue to roll until the line pulls straight through the point of contact, when it will stop.

Now, Johnny, can you answer my question, what starts and what stops the ball? Attraction to the earth. You are right.

This attraction extends to the moon, and causes it to revolve around the earth. Lucy wants to know why the moon does not smash down upon us then.

Watch this ball, Lucy, as I whirl it around my hand by the string—the string will represent the attraction pulling the ball (the moon) to my hand (which we will call the earth). Notice how the string stretches as if trying to break! I will dip the ball in water, then whirl it, and see how the water flies off in all directions! If I should let go of the string, the ball would fly off with great force. This force is called

THE CENTRIFUGAL FORCE,

and when bodies are moving around a center its tendency is to make them fly off from the center. Attraction, you will remember, draws them towards the central body. If these *opposing forces* are of equal strength the revolving body is kept moving in a circle, as the moon revolves around the earth, and the earth around the sun. I have seen a boy whirl a pail half full of water round and round, as I am whirling this ball, safe not to spill one drop as long as rapid motion was kept up. Why? Because the water was forced back in the pail, away from the center of motion, by the centrifugal force. One unfortunate boy tried the same trick very successfully with a pail of eggs, until his companion slyly poked out a stick, stopping them suddenly when directly over his head. Lo! in an instant, he was covered from head to foot with broken eggs. Stopping the rapid motion put an end to the opposing force, and the earth pulled the eggs straight down without any reference to the naughty boy who was under them.

LIGHT BODIES.

Do you ever see anything rising from the earth instead of falling to it? Johnny says balloons rise up, and Lucy says smoke. I will explain the reason of that. Here is a cork which, if I let go, will fall to the table. I will drop it into the glass full of water. It immediately rises to the top and there remains. Why? Because the earth pulls stronger at the water than at the cork, or, in other words, the cork is the lighter, and is pushed up by the water. So it is with the balloon, which is filled with a gas much lighter than air; the same with smoke and steam, they are lighter than air.

Here I have a curious little plaything—a little wooden doll, an inch long, which stands alone, but always on its head. Set it on its feet. Pop! over it jumps upon its head. The doll is made of the pith of some kind of wood which is very light, and in the very top of its head a piece of lead is hammered. The head is so heavy that it is attracted to the earth the moment the doll is free. We call these "pith-witches."

Organization and Duties of the Judges on Live Stock at the Centennial Exhibition.

In our June number, page 86, will be seen a list of stated displays at the International Exhibition. We now give the rules governing the judges for awards of premiums on live stock.

1. Awards shall be based on written reports, attested by the signatures of their authors.

2. Reports will be based upon inherent and comparative merit, the elements of merit being specifically mentioned.

3. The judges assigned to each group will choose from among themselves a chairman and secretary. They must keep regular minutes of their proceedings. Reports recommending awards shall be made and signed by a judge in each group, stating the grounds of the

proposed award, and such reports shall be accepted, and the acceptance signed by a majority of the judges in such group.

4. The reports of the judges recommending awards, must be returned to the Chief of the Bureau of Awards not later than ten days after the close of the exhibition, in each group.

5. Awards will be finally decreed by the United States Centennial Commission, in accordance with the Act of Congress of June 1, 1872, and will consist of a special report of the judges on the subject of the award, together with a diploma and a uniform bronze medal.

6. In addition to reports on the merits of individual exhibits, the judges of each group will be expected to render a report general in its nature, summarizing the exhibition in their group, and indicating the recent progress noted in breeding, rearing or training.

7. Vacancies in the corps of judges will be filled by the authority which made the original appointment. No exhibitor can be a judge in the group in which he is a competitor.

8. The Chief of the Bureau of Awards will be the representative of the United States Centennial Commission in its relations to the judges; upon request, he will decide all questions which may arise during their proceedings in regard to the interpretation and application of the rules adopted by the Commission relating awards, subject to an appeal to the Commission.

The above rules bear the signatures of A. T. Goshorn, Director-general, and Francis A. Walker, Chief Bureau of Awards.

THE CAUSE OF THE HARD TIMES.

Ed. Agriculturist: Hard times. You can hear people of all trades and professions complaining of the very hard times notwithstanding our bountiful harvest of all kinds of vegetables, fruits and grains. Now, why is this? and what is the cause? The problem, to some, may seem difficult of solution. We think to any candid mind, after one moment's reflection, the answer must be, that it is the present uncertain condition of our depreciated circulating medium. This depreciation is caused and upheld by a class of Shylocks in the shape of brokers, money changers and usurers, who are grinding the very life's blood, as it were, out of the honest, industrious laboring class of every needful vocation in life for the purpose of filling their coffers with gold that they take from the unsuspecting, honest poor, in the form of large discounts and usurious interests, by every possible means of chicanery that it is in their power to devise.

That this is the case, the majority of thinking people are ready to admit, but how can it be remedied? I will tell you. There never was a better time to get rid of this horde of Shylocks than the present propitious hour—just in the commencement of a new century of our national existence, and on the eve of a Presidential election. Why should we hesitate to declare ourselves free from the tyranny of such public leeches, by disarming them in the very commencement? We have the means and power within our grasp if we have the manhood and patriotism to use them, which we can do by the following resolution, viz.: that we, the imposed-upon small dealers, merchants, tradesmen, farmers, laborers, and citizens of every class of the State of California, will now and henceforth use United States greenbacks at their par value for our circulating medium or money of account, the same as is done in the other States, with silver enough for exchange. Such a resolution would place every one upon an equal financial basis, and enable the honest, industrious Caucasian race, the citizens of the United States, to come from the other States and displace this horde of coolie foreigners; because, if they were compelled to take the United States greenbacks they would not be so anxious to come to this Coast. We would do away with so many middle men and extortioners as money changers, and strike a death-blow in favor of anti-coolieism, and at the same time bring into general use and circulation in this State the most convenient form of money that can be made, besides the safest and best-secured of any circulating medium ever known to the civilized world, every dollar of which is secured by the entire property of the United States, and will be good as long as this Government shall last, and when it is destroyed gold and silver coined by this Government will not be money any longer with us.

By a laboring man of San Jose, California. S. S. R. Equity.

BEE-KEEPING IN SAN DIEGO.

Ed. Agriculturist: Since I last wrote you, I have met many of the bee-keepers of the county and compared notes. Though there is a slight improvement in the situation, the outlook, on the whole, is gloomy indeed, both as regards production and prices. Many apiaries are for sale at almost any price. Still, I think those who have grip enough to hold on will come out right at last. In some favored localities there has been a large yield of honey. I have met but now one man on the St. Marcus who commenced the season with 108 colonies. He has shipped 80 cases of comb, and 5,000 pounds of extracted honey, and estimates the balance of his crop at 60 cases. And he has increased his apiary to 290 colonies. In my own immediate neighborhood none have done well, and you will understand why when I tell you there are 1,600 colonies on five miles square! Our bees have nearly quit storing—leaving off a month earlier than last year.

A season like this makes one cast about for some means to increase our bee forage. Anyone who will introduce a plant that secretes honey well, and will grow on our mountain sides, will be hailed as a public benefactor. I have experimented some with hoar-hound, and though it grows anywhere, and the bees work it constantly for at least three months, I have doubts as to the quality of honey it produces. If any of your readers can enlighten me on that subject they will confer a favor on me and many others.

Jas. —.

PRACTICAL DIRECTIONS FOR GRAFTING GRAPE VINES.

BY G. N. WHITAKER.

Ed. California Agriculturist: The article in your July number on grafting vines calls out this jotting of practical experience, and if it should be of any benefit to others they will be welcome. I have tried all modes of grafting with but little success except the one I herewith submit, and I have had good success with this form, not losing more than one out of fifty.

I cut my scions in February, from last year's growth, long enough to include three or four buds, and keep them in a dormant state until the vines I graft in are well started to grow—say one or two inches long. I then remove the earth from the vines down to, or near, the first roots; then rub off all the old loose bark, and saw off from one to three inches above the first roots. With a saw, make one, two or three straight cuts down into the stump. If the stump is small I only make one cut in it, but if the vines are large they will admit of two or more cuts. Each saw cut will admit of two scions, one each side of the stump. With a sharp knife, trim the saw cuts out the proper shape for a wedge graft. Trim the scion to fit accurately, leaving a small shoulder on each side of the scion; then insert in the stump, being sure to push it down to the shoulder, and also make a connection with the bark of the scion and the bark of the old stock. Cut the scion down to two buds. When finished, fill up with fine dirt level with the top of the ground, leaving one bud of each scion uncovered. Drive a stake as near as I can without disturbing the grafts. The stake should be as high as it is desirable to grow the vine, and before the grafts have grown large enough to bend over on the ground, I tie them to the stake, keeping the sprouts pulled off during the first and second years, when the grafts are one year old, in the pruning season, say in January or February, prune out to one and two grafts. This process, with such other necessary treatment as any fruit grower will observe from time to time, will insure a crop of fruit the second season after grafting. I dig up all the stumps that fail to grow grafts, as it is useless to try to graft them over.

Santa Rosa, July, 1876.

EASTERN CORRESPONDENCE.

New York, July 8, 1876.

S. H. Herring: *Dear Friend:* I thought a few words from an old friend might not be amiss. Having crossed the plains in '49, and lived in the Willows near San Jose since '52, myself and wife concluded to improve the Centennial year by visiting friends in the East. I noticed at different points near the overland railroad the old immigrant road over which I traveled long ago. Of course, we went to Philadelphia to see

THE WONDERS OF THE WORLD.

For me to give a description of what I saw would be useless, as doubtless you have read in the newspapers of the miles of machinery of all kinds, the statuary, the paintings, and all kinds of goods, from diamonds worth thousand down to a machine for making brick. The stock of all kinds on exhibition is splendid, and so is everything you can mention.

I am at present visiting near the Catskill mountains, New York. They look very much like the mountain range near Los Gatos, California, with perhaps more timber. Everywhere I have been I hear the same complaint,

"HARD TIMES,"

Farmers say they cannot raise enough to "bring the year about and pay taxes," and I don't wonder at it. They sell their hay for $12 per ton, and rye straw for $18 to $20 per ton to make paper (an item our straw burners should make a note of). The consequence is, there is no manure to go back on the farm, and of course the land is lean and there is no sale for real estate. Farms that could be sold for ten thousand dollars eight years ago, could not bring five now. Nobody wants to buy. While Duchess county raises stock, sells little hay, and manures the land, the farmers are fat, their land rich, and no mortgages. It is no use to theorize about "hard times." No one is wholly to blame for the hard times. Some blame the President, some Congress. The Democrats blame the Republicans; the Republicans, the Democrats, and I have no doubt they are both right. The truth is, we are all to blame. Everybody has been extravagant, and almost everybody has tried to get rich—some honestly, others dishonestly. Some have gone out of business. Men who were doing business on borrowed capital have failed. We are getting down to "hard pan." The consequence is everyone gets hurt some, and some a great deal. The price of provisions keeps up. The poor suffer. Just think of it. Flour sells here from $8 50 to $12 50 per barrel. Wages in the harvest field, to men working fourteen hours a day, is $1 50, and the farmers think that is too much! Articles of clothing were never cheaper. Suits of clothes you ask $2 2 to $25 for in San Jose, can be bought here at $14 to $15. Teams of every description are in good demand—$7 a day for a second-rate "turn-out." The people are rushing headlong after pleasure, but keep up the cry "hard times." Rum shops dot the continent, and are filled with bloated customers who cry "hard times." Politicians are noisy, and aspirants to office are hopeful, and still the same cry.

Now, Mr. Editor, it is not the scarcity of money that causes the "hard times." There is probably more money in the country to-day than ever before; but money don't circulate, and the poor are made to suffer.

NOW WHAT ARE WE GOING TO DO ABOUT IT?

We can help the case some by wearing our old clothes a little longer. We can turn them inside out, and upside down, and make them last at least until fall. Don't break that $20 for boots, but wear the old ones. Be sure and keep the mortgage off, whatever you do. Keep away from town except when it is necessary to go. There is always something to do on the farm. Be sure to educate the children. And here let me say, in all of my travels here so far, I have seen no place to come up with our San Jose schools. We must live on wholesome food, as our fathers and mothers did, and dispense with luxuries that will do us no good. Ride less; walk more. Keep out of debt. Have but few wants, and supply them. Trust more in God, and less in politicians. We don't need as much of this world's goods as we think we do. There are some that have more than enough of the necessaries of life, but there will be equality some day.

Now, Mr. Editor, though I am a tiller of the soil, and may not be qualified to theorize on this subject, yet I will give you my opinion.

WE ARE, AS A NATION, TOO EXTRAVAGANT.

Look at the millions that are squandered by our Government, and so on down to the lowest constable. We are sending millions out of the country for delicacies that could be dispensed with. Millions more for silks, satins and flumadiddels. Of course our national debt is being reduced some. While Congress is appointing committees to investigate our affairs it would pay to send over to France and find out how they pay the indemnity to Germany, and where all of the gold came from that is in the banks of France, and how the people economized to get all of that coin. Bring such methods into practice, and it need be but a few years before our national debt is paid off and our banks full of coin. Let us export more, and import—I was going to say nothing, as we can raise everything that is required at home. But I must stop for the present. We are enjoying ourselves very much with old friends, but how many the changes since we left here! J. M. Patterson.

A Bit of Common Sense.

"The busy days are fast crowding upon us," says Ella, with a little sigh.

"Yes," answered practical Etta, "and now I am about to deliver a short lecture;" sitting down and folding her brown hands over her smooth white apron. "Never do your work, but once, Ella, and then do it well. A great many do their work over six, eight, or ten times by so much thinking and talking about it. Now, to-day is Monday, and you and I have done a heavy day's washing—"

"Yes, I am perfectly conscious of it," interruped Ella.

"The clothes are out in the sunshine drying," continued Etta; "do not give them another thought until it is time to bring them in. If you are very tired lie down and go to sleep; if not, occupy yourself with an interesting book. We have done enough hard work today. You well know mother does not expect us to do anything more until supper time. To be sure we must go to house-cleaning to-morrow, but do not let the fact enter your mind until after breakfast to-morrow morning; then it will not require ten minutes to plan our work, and one can see so clearly after a good night's sleep. Now, work in this way, Ella, and you will soon find yourself singing all day long, instead of wearing that ugly frown upon your brow."

"Yes, that's just it!" said their father, who had been an amused listener to Etta's lecture, opening the kitchen door; "there's a bit of common sense in that small head of yours, my daughter."

1776 AND 1876.—Here is a centennial contrast—first as copied from Poor Richard's Almanack—1776:

> Farmer at the plow,
> Wife milking at the cow,
> Daughter spinning yarn,
> Son threshing in the barn,
> All happy to a charm.

And this is the modern improvement—1876:

> Farmer gone to see a show,
> Daughter at the piano,
> Madam gayly dressed in satin,
> All the boys learning Latin,
> With a mortgage on the farm.

Sheep and Goats.

Angora Goats and Mohair---Criticisms Answered.

HARRISON G. OTIS, of the Santa Barbara *Press*, thus answers an editorial article on the mohair interest which appeared in the *Alta California* some time since, in which occur statements and hostile criticisms not justified by the facts, in his opinion:

The article makes the loose assertion "that there has been no mention in the commercial statistics of any shipment of goats' wool [from California], though seventeen years have elapsed since the importation of Angora goats was commenced, and though, according to the assessors' statistics, the State had 24,000 of them 1871." The impression here conveyed is that breeding for fleece has been prosecuted in this State for seventeen years. On the contrary, nearly all the work in that direction has been done within ten years. There were but few importations and but little breeding in California prior to 1867. The writer's incorrect statement as to shipments of fleece is immediately followed by an admission which takes away half its force, even if it were true. The admission is in these words: "It is true that most of these were grades crossed with the common stock, no Angora she-goats having been brought with the first bucks."

It is just this fact, and her very small and recent beginning in this necessarily slow work, that has kept California back in the prosecution of this splendid industry. To breed from common, non-fleece-bearing ewes large flocks of good grade mohair-producing goats is not the work of a day; it is a work of years. But there was no other course for California breeders to pursue. The State could not be stocked with pure mohair goats in a century, if importations alone were to be depended upon, unless they be more frequent and extensive than they have been; for the Angora comes from a distant, hostile, and almost inaccessible region of Turkey in Asia, ten thousand miles away.

The fact that a very large proportion of all the fleece-bearing goats now in California are only grade Angoras would of itself be a sufficient answer to the charge that no considerable shipments of mohair appear in the official statistics, under our economical system of breeding by crosses of pure Angora bucks on the native short-haired ewes, low grades must of course come before high grades—first light fleeces of short mohair intermingled more or less with kemp, according to grade, followed in the end by the longer, finer, heavier and more lustrous fleeces of the thoroughbreds. In other words, each generation, under scientific breeding, becomes purer and its fleece finer than its predecessor.

But it is a great mistake to suppose that there have not been any shipments of mohair from California, and it is not creditable to the *Alta* to make such an assertion. Many such shipments are on record, and we are satisfied that there are many more which have not been reported, because mohair is frequently shipped as wool to avoid the higher freight charges imposed by the railroads. These charges are generally double those on wool; and we have the record of an instance where one lot of mohair was charged 6¼ cents per pound for freight eastward, while wool was being carried for 2¾ cents per pound. The consequence was that the next lot sent by these eye-opened shippers was marked *wool*, and was of course quoted in the commercial reports as wool. We may reasonably conclude that there have been many similar cases, thus materiall reducing the statistics of mohair exportations. Small as these shipments confessedly are when compared with the shipments of our great staple, wool, they have already been sufficient to prove that the culture of the Angora in California is an assured success. The results achieved are really adequate to the means employed.

It is a great mistake, too, if not a misrepresentation, to assert, as our cotemporary does, that "the wool sheared from Angora goats in California is so small in quantity that it is not considered worthy of notice in commercial or official statistics." There is abundant evidence to be had that many very fair clips of Angora fleece have been made yearly in California, and the mohair shipped for manufacture to Philadelphia, New York, Boston, Jamestown, and Liverpool, England, during the last five years. And we may add that facts in our possession show the demand in those markets to be beyond the supply.

The *Alta's* information on the goat subject is by no means confined to California; such as it is, it extends all over the world, as this extract indicates:

(Continued in next issue.)

Gloves Gloves.

CHEAP, COMFORTABLE, SERVICEABLE

THE ANGORA

ROBE AND GLOVE CO.,

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Are making a Specialty of Manufacturing all styles of Gloves from the Angora Goat Skin, and claim for them:

1st.—They are cheaper than buckskin gloves.

2d.—The skins are tanned with the grain on, and are very nearly water-proof, and when, by long exposure, they are wet, they dry out perfectly soft—as good as new.

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Which, for Beauty, Durability, and Cheapness, are inferior to none.

Buckskin Gloves, Mittens, Etc.,

In all verieties, and as good as the best.

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Without Medicines, Dr. Bourne effects cures in cases considered hopeless under other modes of treatment; his method being peculiar to himself, and the result of an experience as a Water-Cure Physician during more than a third of a century.

It is Dr. Bourne's effort to make quick cures in all cases, and he always designs to be, and is, eminently successful; but upon no condition will he accept a patient who entertains the absurd opinion that "sick people must not eat."

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The best of food, and plenty of it, will be provided.

A limited number of patients will be received who may be willing to pass a few weeks in retirement and primitive simplicity.

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THE MOST IMPORTANT IMPROVEMENT EVER MADE.

It saves labor and preserved health. No more diseases and deaths, side or back aches from using sewing machines. No teaching required. A child can run it. Always starts the right way. Never goes backwards and breaks things. Can be stopped instantly. With it on your machine, you can do double the work you can do without it. Fifty stitches can be made with one pressure of one foot. Approved by the Massachusetts State Board of Health (see official report, 1872), Massachusetts Medical Society, and Massachusetts Charitable Mechanics' Association. The HALL TREADLE is a part of all HOME MACHINES sold by me.

☞ The Hall Treadle can be attached to any other sewing machine. Remember this. We will attach it onto any machine. It will cost you only $12, and will save you a deal of hard work and trouble.

THE HALL TREADLE GRINDING MACHINE

Must be seen to be appreciated. For a Farmer or Mechanic to see it, is to buy one. It is an indispensable article in every house, shop or hotel.

THE HALL TREADLE JIG SAW AND BORING MACHINE

Is an accomplishment in every workshop. The Hall Treadle is applicable to all machinery requiring a foot power—Sewing Machines, Grindstones, Jig Saws, Turning Lathes, Jewelers' and Dentists' Lathes, etc. Send for circulars.

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In connection with my regular business, I have a fine MACHINE SHOP, for repairing all kinds of machines and like work, and have employed MR. CHARLES C. REDMOND, a Skillful Machanic, as manager, and am now prepared to repair machines and machinery, make models, etc., on the most reasonable terms, and ALL WORK GUARANTEED.

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DID you know it is Spring in August, When verdant hills are brown? It may not be spring in the country, But it's always Spring in town!

For T. W. SPRING is selling Clothing for whole families at such Low Rates that hotel tinns are made easy to the purchaser. Dont be so verdant as to go without clothes because others ask high prices, but go to T. W. Spring's, invest and be happy.

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40 Acres, Two and a Half Miles West, rich valley land, at $80 per acre.

50 Acres, on the Alameda Road, Six miles out, House, Barn, etc.; a pretty place for $5,000.

223 Acres, Near Cinnabar Hotel, on Almaden Road, six and a half miles out; a Big Bargain for $12,000; has a Fine Grove of Timber, House, Barn, Wind-mill, Vineyard, etc.; all valley land but 60 acres. Terms—One-half cash; balance in three years at 8 per cent. per annum.

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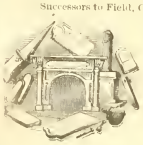

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VOL. 7 CALIFORNIA No. 9

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1876

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(Index on page 142.)

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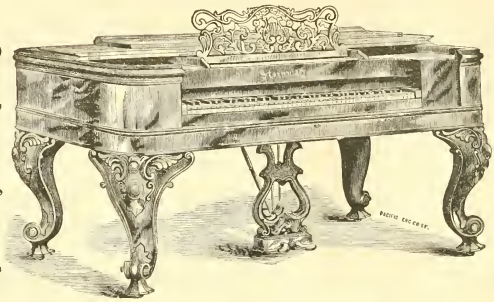

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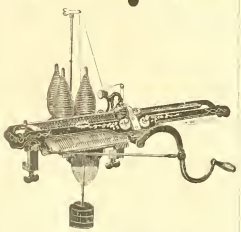

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 7--No. 9. | SAN JOSE AND SAN FRANCISCO, CAL., SEPTEMBER, 1876. | SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

City Gardening.

SEASONABLE HINTS.

SEPTEMBER is an important month to the gardener in this climate.

There is a good deal to look out for, which, if done in season, will not be regretted.

The seeds of annuals and perennials, as they ripen, should be carefully selected and saved. Save only the best seeds from healthy plants. When thoroughly dry put into glass vials so that no insects or mice can get at them; or they may be done up in papers, the name written on, and be kept safely in a covered glass or earthen jar.

If the seeds of perennials are planted this month in rich moist earth, in beds or boxes, and are carefully tended, they will grow sufficiently this season to come into early bloom next season, whereas, if the planting is deferred until next spring, you will have to wait a whole year for blossoms. This is a matter of some moment to every lover of flowers. Hollyhocks, Perennial Peas, Sweet Williams, Pinks, Carnations, Evening-Primroses, Rockets, Foxgloves, Poppies, Stocks, Wall flowers, Pentstemons, Primroses, etc., will make a good growth during the next two months.

Cuttings of various kinds will grow enough to make fair roots, and be fine plants another season if put out at once in suitable soil and kept well watered. Pure sand is as good as anything to start cuttings in. They may be planted in boxes or in beds, and need considerable light and sun to do well. At first, for a week or two, a little shelter from the hot sun is best. Currant, Gooseberry, Rose, Honeysuckle and other cuttings of hard wood plants, should have the leaves cut off before planting. Soft wood plants, such as Geraniums, Fuschias, etc., will grow best with the small leaves left on. Give all cuttings plenty of water.

Layering by bending the branches of plants down so as to cover a portion of the stem with earth without its being first entirely severed from the plant, can also be done with advantage this month. Budding should be done also. Persons who do not understand layering and budding should get some one to show them, or procure an illustrated work on the subject. It is simple and easy enough when once understood.

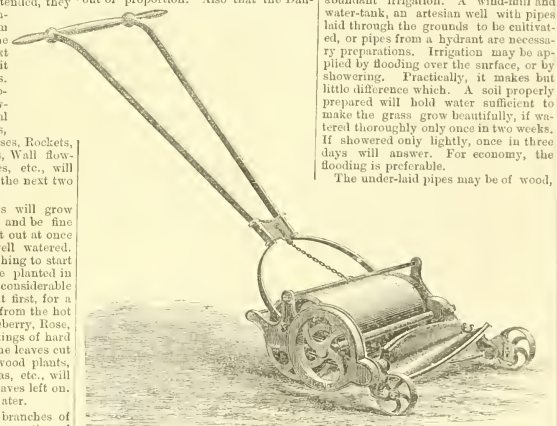
September and October are months in which you can transplant evergreen trees or plants. Of course, we mean such as have been grown in pots or boxes, or such as are carefully taken up with a ball of earth attached about the roots. It is necessary that the earth should be kept continually moist about the roots after transplanting. The first ten days it is well to shelter from the hot sun. This can be done by wrapping the whole tree loosely in sacking, tied to stakes on either side. Transplanted this month or in October, the tree will form new rootlets and become established in the soil before winter, and be ready to grow finely in early spring.

In the article on lawns, it will be seen that we advise the sowing of new lawns this month, if plenty of water can be supplied.

Prune away all dead plants, rusty branches, and withered flowers and leaves, if you want to keep your gardens looking fresh and bright. A little care in this direction will make a great difference in the appearance of your flower beds.

What we have said before about watering abundantly, should apply this month also, particularly during hot weather, of which we always get a week or two in September.

See that the climbing plants and vines are strongly supported so as to not hang out of proportion. Also that the Dahlias and other heavy late flowering plants are tied to stiff stakes, to prevent the wind from breaking and twisting them down.



CENTRAL PARK LAWN MOWER.

You can plant out bed and walk edgings of Primroses, Violets or other plants this month, if you wish nice blooming plants early, and a fine winter garden as well. Plant Strawberry beds for early fruiting.

THE LAWN.

There is no prettier feature about a dwelling than a nice grassy lawn. There are many of them in San Jose, but generally only in front of the most costly residences. Now there is nothing so very expensive about a lawn as to prohibit common people from having them, and enjoying the green carpet where the children can rollic in sportive glee, and the eye can rest relieved from the general glare of desert brown of the hills and stubble fields at this season. Every household can have its oasis to give life and cheerfulness to its surroundings. Quite as much as they need money to supply necessities, do our farmers and the people generally need to cultivate the æsthetic tastes, and to gain the serene enjoyments of tasteful homes and places which a little time pleasantly given can as well procure as money can. The enjoyment of self-satisfaction arising from such effort is something that money can not purchase.

One of the main necessities for a lawn is plenty of water, for grass cannot make a thick sward and keep a fresh growth of living green, in our climate, without abundant irrigation. A wind-mill and water-tank, an artesian well with pipes laid through the grounds to be cultivated, or pipes from a hydrant are necessary preparations. Irrigation may be applied by flooding over the surface, or by showering. Practically, it makes but little difference which. A soil properly prepared will hold water sufficient to make the grass grow beautifully, if watered thoroughly only once in two weeks. If showered only lightly, once in three days will answer. For economy, the flooding is preferable.

The under-laid pipes may be of wood, with plugs at intervals to draw out and allow the water to flood the surface. Once prepared, a lawn is no trouble, but a continual pleasure. The grass you will clip from it the year round will more than pay for all the trouble. Indeed, as an investment, on every farm, a liberal sized lawn can be *made to pay* by supplying soiling for the cows and horses the year round. A half acre will supply many tons of sweet green feed, if richly dressed with manure occasionally, and well watered through the dry season.

The Central Park lawn mower, which we illustrate on this page, is simple in construction, cuts easily, and in dry or green grass, long or short. It costs $20 to $25, and will last a lifetime.

We are indebted to Mr. R. J. Trumbull, the San Francisco seedsman, for the use of the cut and for some

PRACTICAL HINTS ON MAKING A LAWN:

1—Soil should be deeply and thoroughly pulverized—making it rich with well-rotted cow (the best) or horse manure. If the soil is naturally rich, a good quality of manure will still improve it.

2—Care should be taken to have a smooth surface—permitting no depressions anywhere, where water might stand. If the lawn is intended to be flat, it should be made as smooth as possible before sown.

3—A lawn may be made at any time in California, but the most propitious period is from the first of September till the 15th of November, or between February 1st and March 15th. If made during warm, dry weather, after the seed has been sown and raked in it should have a top dressing one inch thick of well-rotted, finely-pulverized manure, which serves to protect the seed during germination and making its first roots. This dressing will stimulate growth of grass at any time, and might be advantageously used no matter at what period seed is sown.

4—There are several varieties of grass used for the formation of lawns, but the more acceptable are the best quality of Blue Grass sown alone, the same with a proper proportion of White Sweet Clover, and the Mixed Lawn Grass, which is composed, as its name indicates, of several fine grasses mixed in suitable proportions.

5—The quantity of seed sown should be in the proportion of at least fifty pounds to the acre. The seed cannot be sown too thick, but if sown too light the work must be done over again. The point is to get a thick stand to withstand our dry climate, and keep the lawn close and preserved from bunching.

6—To make a fine, thick, velvety lawn, the grass should be cut once a week, or oftener, according to the season.

[We supplement the above by adding that for heavy soil it is a good plan to cart sand to cart sand to mix with the top dressing of manure. Also that after the soil is manured and thoroughly stirred by repeated plowing and harrowing, and leveling, it should be heavily rolled down before the seed is sown. Remembes that once well prepared and properly seeded down, etc., a lawn is easily cared for ever after. Blue Grass or Red-top makes the best lawn. All weeds should be pulled out by hand until the sward is firmly rooted.]

Drying Fruit.—Now is the season for putting up fruits for the year, canning, drying, preserving, etc. Sun dried fruit, when rightly done and well prepared, is good enough for anybody. Put up before it is quite hard, in small, tight boxes, press it in firmly, and seal up so that the moths cannot enter. The trouble from moths is not from eggs laid before or during the drying, but after it is packed away. If securely sealed, it keeps fresh and cannot get wormy.

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EDITORIAL NOTES.

Remember the poor publisher and printer when you realize on your crops.

The premiums we offer are chosen by experienced artists, and are not cheap john importations. Our arrangements cannot be excelled by any for getting nor for giving first-class, choice premiums to subscribers.

The first rains generally catch a lot of wheat belonging to some farmer Slack out of doors unsheltered. It probably would if it did't commence until Christmas. The prudent man will not be caught out in the wet in any such way.

Poisoning Squirrels.—This is a good season to poison squirrels. They are ravenously fond of melons and fruit. Strychnine put into these and placed within their reach will slay them most completely. First bait them with melons or fruit not poisoned. After their shyness is allayed give it to them good and strong, and you will be gratified with success. Be sure that domestic animals are securely fenced away from the poison.

Dry sowing does well enough in soil which has never been plowed when too wet, so that it lays in clods. The soil should crumble nicely, or lay till it can be pulverized when moist. Very weedy land should be allowed to lay till the weeds start, then be plowed under before sowing. Dry sowed land should be rolled as soon as the rains soak the surface to crush all clods, then harrowed with a slanting-tooth harrow to loosen the surface before the grain gets six inches high.

Capital vs. Enterprise.—We often hear the remark that capital and capitalists are needed to build up business and make times lively. There never was a greater mistake, so far as the general prosperity is concerned. Wherever capital controls, a few get rich perhaps, but it is at the expense of the masses. There must be deprivation and poverty among the laboring people where wealth commands labor through high interest and low wages. The more the common people depend upon accumulated capital, and are controlled by it, the greater will be the rates of interest and the lower and more uncertain the labor, both as to wages, opportunity to work, and quality of service. Go into a community where there are no rich men who live upon other's earnings, where everyone is depending upon labor and enterprise for success, and all are striving in a nearly equal race to get on in the world, and there you will find a place rapidly building up, wages good, work plenty, and all sorts of business flourishing. Money will be plenty, because not hoarded. When men count the interest on their money they are penurious, exacting, hard, and anything else but enterprising, as a rule. They are not the tradesman's best customers, nor the business man's supporters and friends. They are drones, eating the best honey, producing none. Their money is drawing the life blood of labor; they are rich, and everybody else is poor from paying tribute to their wealth. In our condition of civilization, we need capital, that is, money, of course. But we do not need any number of rich persons to control all the money and ride industry to death. He who is the most independent of capitalists, pays no interests, works for himself, and commands his own wages, is best off, everything else being equal.

Good prices for wheat and ready sales for cash would make good times in California. The present low prices and dull sales make everything terribly hard. The merchant and mechanic experience the effects of the low prices even more than the farmers themselves; for it is upon the money the farmer puts into circulation that they chiefly depend We are told by dealers in San Jose that for years there has been nothing like the scarcity of circulating coin as at present. It is not upon capitalists that they depend for trade but upon the working people, who buy when they have money to buy with. Every merchant and storekeeper, and every mechanic and business man should join with the farmer in word and action to break up the wheat ring that is bearing down the wheat market. The condition of crops in Europe and America this year should justify at least $2 per cental for wheat in California, and we think not less than $2.25, and active demand. The wheat ring that will either rule or ruin, and ruin if it rules, keeps the price to near, and below, $1.50 per cental, and pays little cash down at that. The farmer is at their mercy, and everybody suffers. At least $10,000,000 are kept out of circulation, and $6,000,000 are actually swindled out of our producers by the speculators.

When our merchants and mechanics fully realize what THEY are losing in allowing this stupendous ring to control wheat matters, they will in every way encourage and assist the farmers and Grangers in breaking it up. The very life of trade of all kinds depends on the prosperity of producers. The money obtained by them is soon put into circulation, through merchants, mechanics and the laboring masses. The wheat ring on this coast must be broken, or ruin will stare many a worthy business enterprise in the face, and everyone will feel the general depression.

Providing fuel for the year is now seasonable work. The rains will send you to the fields. Haul your wood, prepare it for the kitchen, and shelter it from the weather. This is a matter of economy that pays in more ways than one.

Use the Manure.—Now is the time to grther up all the manure about your yards and stables and haul it upon the land. Dump in piles at convenient distances to be spread upon the soil as soon as the first rains. Or it may be spread at once and harrowed or chisled in upon volunteer grain land. It is better to rot upon the soil one season in this way than to be plowed in at once.

Make plans and calculations about what fencing is needed, and haul your posts, planks and pickets early. If your wheat market lies in the same direction, "kill two birds with one stone" by bringing a load on the return trip. The best and cheapest farm fence in our valley is made of square, split redwood pickets, driven firmly in the ground. Two 4-inch boards are nailed upon them, one near the center, and the other near the top, making a handsome, strong and durable fence.

Don't neglect to stack your straw. It is a wicked waste to burn it or let it rot in the rains when there are so many head of stock in the country that need it. If well stacked it will last good a dozen years, and may eventually prove a bonanza in some coming dry season. Save it. After building a stack and ridging it with a heavy scantling, rake the roof down very thoroughly, and re-rake until it will shed water perfectly.

As a rule, our California farmers make no use of the manure that accumulates about the stables and yards. We know of a farmer near San Jose that counts himself a good farmer, who allows his neighbors—poor fellows—to haul the manure from his place onto their own, and is glad so easily to get rid of it! We are glad to be able to say that the men who use manure take the AGRICULTURIST, while he who gives it away "can't afford to take so many papers—has no time to read."

The Angora Robe and Glove Company of San Jose are increasing their capital stock and making preparations to go still more extensively into the bdsiness. Their enterprise, though new and in some directions experimental, has proved a success financially and otherwise. Their goods are now sold in every county and in many principal stores in the State. Their harvest gloves, manufactured from goat skins, are pronounced by all just the thing, and something much needed. Their genuine black kids for ladies and gentlemen are in demand faster than they can be made. Mr. Welch, the experienced dyer, made a good hit on coloring kid skins. The tanning process is also new and wonderful. During a late visit we saw a lighted match touched to the tanning vat when an inflammable gas that is evolved during the process of tanning burst out from among the submerged skins at a furious rate. The skins tanned by this "fire process" are as soft and pliable with the grain on as the softest buck skins are without a grain. The dyeing process used in coloring the glossy fleeces for robes, furs, etc., leaves the mohair as soft and silky as possible. Any color or shade, from a light beaver to a glossy black, is given the fleeces—to suit the various tastes. The fur gauntlets from fine skins resemble the valuable furs of various animals. The Company have lately sent a full line of their goods to Philadelphia to show at the Centennial, and propose establishing a house East for the wholesaling of their goods. Not only will they tan and manufacture into articles the Angora fleeces and skins, but they will work buckskins and such other valuable skins and furs as can be obtained on this Coast. The business, for Angora goods alone, is a most promising one, and one which is of great benefit to all breeders of these animals. As the production of mohair increases, there is promise of a factory, or machinery in our woolen mills, to work this beautiful production into such cloths and fabrics as are in demand all over the world.

Capital and Labor.—There should be no conflict between capital and labor. There would be none were money shorne of its power to extort enormous rates of interest. Were money as much of a servant as labor is, there could be no antagonism. While money is king, and labor is its slave, there must and will be antagonism. Man's sense of justice and love of liberty must revolt against a condition that degrades him because he is poor and honest and works for a living. The natural remedy for this unnatural condition of the supremacy of wealth, is to make money so plenty, and rates of interest so low, that everyone can command through honest labor what he needs, without supporting others in idleness. Should the people, through Government, issue in abundance a standard money, payable for all obligations, and protected from speculation by stringent laws, and allow individuals to draw it at low rates of interest, upon pledges of their real property, to an amount representing the same, money would soon become so plenty, at cheap interest, that those who accumulate money could not extort a living from others. It would place labor and enterprise where it ought to be, and promote honesty by encouraging industry of every description. Idleness would not be enforced for want of employment, nor labor poorly paid for want of patronage and from inability to meet payments of taxes, interests and rents on the part of employers. Capital and labor would have no occasion to be at war. An honorable peace would be established. The rich man and the poor man could be friends without either making concessions to the other.

A BETTER FINANCIAL SYSTEM NEEDED.

ED. CAL. AGRICULTURIST: I have received several numbers of your journal. Inclosed please find a postal order, and continue the journal as long as that will pay. I am taking several (eleven) papers and journals, and have asked several persons to take the AGRICULTURIST.

I notice an occasional article on finance, recommending the American system, that is, paper money that will pay all debts, dues, duties, taxes, etc., and that the Government won't repudiate for customs, and which will always, therefore be at par; also be interconvertible into bonds drawing a small interest—at the same time doing away with the National Banks. Of course, a few thousand bankers and money-lenders will howl, but millions of laboring people will rejoice and be made happy. More financial information should be circulated among the laboring classes. Even farmers stand more in need of financial than of agricultural information.

Petaluma, August, 1876. F. P.

Poetry.

Tom's Come Home.

BY T. J. TROWBRIDGE.

WITH its heavily rocking, swinging load,
The stage coach rolls up the mountain road;
The mowers lean on their scythes and say,
"Hullo! what brings Big George this way?"
The children climb the slats, and wait
To see him drive past the door-yard gate;
When, four in hand, sedate and grand,
He brings the old craft like a ship to land,
At the window, mild grandmotherly eyes
Beam from the glasses with quaint surprise,
Grow wide with wonder, and guess, and doubt;
Then a quick, half-stifled voice shrieks out,
"Tom! Tom's come home!"

The face at the casement disappears,
To shine at the door, all joy and tears,
As a traveler, dusty and bearded and brown,
Over the wheel steps lightly down.
"Well, mother!" "My son!" And to his breast
A forward-tottering form is pressed
She lies there, and cries there; now at arms-length
Admires his manly size and strength
(While he winks hard one misty eye);
Then calls to the youngsters staring nigh,
"Quick! go for your grandther! run, boys, run!
Tell him your uncle—tell him his son—
Our Tom's come home!"

The stage coach waits; but little cares she
What faces pleasantly smile to see
Her jostled glasses and nodded cap.
Big George's hand the trunk unstrap
And bear it in; while two light-heeled
Young Mercuries fly to the neighbors' field,
And shriek and beckon, and meet half-way
The old gran'ther, lame and gaunt and gray,
Coat on arm, half in alarm,
Striding over the stony farm.
The good news clears his cloudy face,
And he cries, as he quickens his anxious pace,
"Tom? Tom come home?"

With twitching cheek and quivering lid
(A soft heart under the hard lines hid),
And "Tom, how d'e do?" in a husky voice,
He grasps with rough, strong hand the boy's—
A boy's no more. "I shouldn't have known
That beard." While Tom's fine baritone
Rolls out from his deep chest cheerily,
"You're hale as ever, I'm glad to see."
In the low living porch the mother stands,
And rubs her glasses with trembling hands,
And, smiling with eyes that bleer and blink,
Chimes in, "I never!" and "I'd only think!
Our Tom's come home!"

With question and joke and anecdote,
He brushes his hat, they dust his coat,
While all the household gathers near—
Tanned urchins, eager to see and hear,
And large-eyed, dark-eyed, shy young mother,
Widow of Tom's unlucky brother,
Who turned out ill, and was drowned at the mill
The stricken old people mourn him still,
And the hope of their lives in him undone:
But grief for dead sons, the maimed son—
Their best-beloved and oldest boy—
Is all forgotten or turned to joy,
Now Tom's come home.

Yet Tom was never the favored child,
Though Tom was steady, and Will was wild;
But often his eyes and his brother's share
Of blows or blame he was forced to bear;
Till at last he said, "Here is no room
For both of us!" And he left home.
Scant grace was shown has proved the one
Large-hearted, upright, trusty son;
And well may the old folks joy to find
His brow so frank and his eye so kind,
No shadow of all the past allowed
To trouble the present hour, or cloud
His welcome home.

His trunk unlocked, the lid he lifts,
And lays out curious, costly gifts;
For Tom has prospered since he went
Into his long self-banishment.
Each youngster's gies, as he hugs his share,
The widow's surprise, the old folks' ar
Of affectionate pride in a son so good,
Thrill him with generous gratitude.
And he thinks, "Am I that lonely lad
Who went off friendless, poor and sad
That dismal day from my father's door?"
And can it be true he is here once more,
In his childhood's home?

'Tis hard to think of his brother dead,
And a widow and orphans here in his stead—
So little seems changed since they were young!
The row of pegs where the hats were hung;
The checkered chimney and hearth of bricks;
The sober old clock with its lonesome ticks
And shrill, loud chime for the flying time;
The stairs the bare feet used to climb,
Tom chasing his wild bedellow Will:
And there is the small, low bedroom still,
And the table he had when a little lad:
Ah, Tom, does it make you sad or glad,
This coming home?

Tom's heart is moved. "Now don't mind me;
I am no stranger guest," cries he.
"And, father, I say,"—with the old-time laugh—
"Don't kill for me any fatted calf
But go now and show me the sheep and swine
And the cattle—where is that colt of mine?—
And the farm and crops—is harvest over?
I'd like a chance at the oats and clover!
I can mow, you'll find, and cradle and bind,
Load hay, stow away, pitch, rake behind;
For I know a scythe from a well-sweep yet.
In an hour I'll make you quite forget
That I've been from home."

He plucked from its peg an old farm hat,
And with cordial chat upon thisand that,
Tom walks with his father about the place,
There's a pensive grace in his fine young face
As they loiter under the orchard trees,
As he breathes once more the mountain breeze,
And looks from the hill-side far away,
Over pasture and fallow and field of hay,
To the hazy peaks of the azure range,
Which change forever, yet never change.
The wild sweet winds his welcome blow;
Even old Mountain-Locke seems to know
That Tom's come home.

The old man stammers and speaks at last:
"You notice your mother is fail ng fast,
Though she can't see it. Poor Will's disgrace
And debts, and the mortgage on the place;
His sudden death—it was a dreadful blow;
She couldn't bear up like a man, you know.
She's lulled of you since the trouble came;
Some things in life no one sense to blame
Herself for; what, it is hard to tell.
I marvel how she keeps round so well,
For often she lies awake.
I'm thankful, if only for her sake,
That you've come home."

They visit the field: Tom mows with the men;
And now they come round to the porch again.
The mother draws Tom aside; his sink
Her voice to a whisper low, "and you think?
"You see," says she, "he is broken quite.
Sometimes he tosses and groans all night,
And—Tom, it is hard, it is hard indeed!
The mortgage, and so many mouths to feed!
But tell him he must not worry so,
And work so hard, for he don't know
That he hasn't the strength of a younger man.
Counsel him, comfort him, all you can,
While you're at home."

Tom's heart is full: he moves away,
And ponders what he will do and say.
And now at evening all are met,
The tea is drawn, the table set;
But when the old man, with bended head,
In reverend, fervent tone has said
The opening phrase of his simple grace,
He falters, the tears come down his face,
For the words seem cold, and the sense of the old
Set form is too weak his joy to hold;
And broken accents he can express
The upheaved heart's deep thankfulness,
Now Tom's come home.

The supper done, Tom has his say:
"I heard of some matters first to-day;
And I call it a shame—you're both to blame—
That a son who has only to sign his name,
To lift the mortgage and clear the score,
Should never have had that dread before.
From this time forth you are free from care;
Your troubles I share; your burdens I bear.
So promise to quit hard work, and say
That you'll give yourself a holiday.
Now, father! now, mother! you can't refuse;
For what's a son for, and what's the use
Of his coming home?"

And so there is cheer in the home to-night.
It can hardly hold so much delight.
Tom wanders forth across the lot,
And under the stars (though Tom is not
So pious as boys often have been)
Thanks Heaven, that turned his thoughts from sin,
And blessed him and brought him home once more.

And now he knocks at a cottage door,
For one who has waited many a year
In hope that thrilling sound to hear,
Who, happy as other hearts may be,
Knows well there is none so glad as she
That Tom's come home.
—[Harper's Magazine for September.

Slow and Sure.

Upon the orchard rain must fall,
And sunlight every branch to rout;
And blossoms bloom and fall withal
Before the fruit is fruit.

The farmer needs must sow and till,
And wait the wheaten bread,
Then cradle, thresh, and go to mill,
Before the bread is bread.

Swift heel may get the early shout,
But, spite of all the din,
It is the patient holding out
That makes the winner win.

To a Grasshopper.

Tiny, pea-green harlequin!
What of wonder can describe
All your odd, gymnastic tribe,
To the kangaroo akin?
Unless Darwin goes amiss,
With his queer hypothesis.

Chirping chimer, clover climber,
Insect athlete! never stumbling,
In your ground and lofty tumbling.
Strange it is a thing so fragile,
Should be so extremely agile.

Go it, then, spasmodic leaper!
Seize your pleasure while you may:
Blow your horn and have your day;
When the primrose days are over,
And all dead are vines and clover,
That austere, remorseless reaper,
Time, will turn us all to hay!

When October,
Like a varlet,
Robs the woodland's summer dress;
And the maple, blushing scarlet,
As the ruffian winds disrobe her,
Shrinks in timorous distress;
When no longer leans the lily
By the mill-pond's mossy edge,
And an influence damp and chilly
Blasts the rose and daffodilly,
And the vines along the ledge—
Then the cricket
Leaves the thicket
To creep under kitchen rugs;
Then, O grasshopper!
Unique acrobatic vaulter,
Your frail powers will fail and falter;
And some chill, autumnal morning,
Sting, dying,
Without warning,
You will find it useless trying
Leaping, creeping, singing, flying;
With some early robin waiting,
Cool and calm, and aggravating,
Like some grim and hungry wizard,
Obviously deliberating
When to pop you in his gizzard.
Farewell butterflies and clover,
Death is fate the wide world over.
—[Golden Rule.

A Hundred Years Ago.

BY NATHAN D. URNER.

While aliveest every day, just now,
Some great event we celebrate,
That surged about the hundred prow
Of freedom's infant ship of state—
Through fire and smoke and glad huzzas,
Through cannon's crash and bonfires glow,
A vision springs of men and things
A hundred years ago.

They had not then the railroad speed,
The lightning interchange of thought,
Nor half the needs we have of greed.
That with the present age have wrought;
But news was news, though slower sped,
No headlong thoughtless care had to go,
And ruder hands fed men's demands,
A hundred years ago.

No mighty cities reared their spires,
No proud, palatial homes were theirs,
They had not then our grand desires,
Our railway sloe and summer shares;
But they had thrifty towns and homes,
Had hearths with health and faith aglow,
And earnest toil brought goodly spoil
A hundred years ago.

Our age can theirs with ease surpass
For air and steam, and other powers;
They lacked the gas and glass and brass
That mark this rapid age of ours;
But they had eyes as keen and bright,
And faculties as rare, I know,
And wholesome rests, and manly breasts,
A hundred years ago.

And if they gave us not the vim,
The dash and polish we have gained;
If life with them was dull and dim,
Of humbler hopes and tastes restrained,
The mighty land which is our pride,
Our nation's birth, to them we owe
Who lived and thought and wrought and fought
A hundred years ago.

Now, while our glad centennial fires
Through all our country blaze afar,
God bless our strong, heroic sires
Who molded us to what we are!
Nor shall their glory be forgot
While pa riot blood shall course and flow
As filled the veins and fired the brains
A hundred years ago.

A MOTHER told her seven-year old boy, never to put off till to-morrow anything he could do to day. The little urchin replied, "then, mother, let's eat the rest of the plum pudding to night.

Domestic.

SEASONABLE RECEIPS.

Original, or Such as Have Been Proved Good by Trial.

EFFECT OF LIGHT ON CANNED TOMATOES.

IT will be interesting to every housekeeper to know that tomatoes will not keep if put up in glass jars, since the exposure to light causes them to ferment, but if sealed neatly in bright tin cans will keep perfectly sweet. Yeast is effected by light in the same manner. Anyone troubled with having bread turn sour should be careful to keep their yeast in a stone jug. If in glass, it should be placed in a dark closet.
HOUSEKEEPER.

[Would it not be just as well to put tomatoes in glass and *wrap each jar in paper* so that the light cannot get to the fruit? Unless the tin is *new*, the acid from the tomatoes will be likely to corrode the metal and poison the tomatoes. We prefer glass for all kinds of tart fruits. Tin should not be used the second time, if used at all, is what our good wife says.— ED.]

FRICASSEED TOMATOES.

Place the tomatoes in a stone jar, and put it into a steamer. When they are tender, beat them to a pulp and put into a stew-pan with a little onion (which has been minced and stewed in butter until it is tender), a seasoning of pepper and salt, and some chopped parsley; simmer the mixture for a few minutes, and serve it very hot. It is good either alone or served in the dish with chops, or other meat, sausages or fish of any kind. Tomatoes and sausages are capital. Fry the sausages and arrange them in the dish in front of the fire. Cut the tomatoes into slices with some onion thinly sliced; fry them, season them with pepper and salt, place them among the sausages, and serve them hot. In the same manner they are excellent with anything warmed a second time—chicken, rabbit, game or pork, cold meat in slices, or fish of any kind.

TOMATO SAUCE.

To four quarts of bruised tomatoes add half a pound of salt, and allow to stand for three days, then express the juice. To each half-gallon on juice add 4 oz. of shallots, and ¼ oz. black pepper; boil for an hour; strain and add mace, allspice, ginger, nutmeg, of each ½ oz., coriander (and, if desired to impart color, cochineal) of each ¼ oz. Simmer gently for half an hour, strain, and, when cold, bottle it.

TOMATO PIES.

Take ripe tomatoes, peel and slice. Sprinkle over a little salt, and let them stand a few minutes; pour off the juice, and add sugar, half a cup of cream, one egg, nutmeg, and cover with a rich paste, and bake in a moderate oven over half an hour. This makes an excellent and much approved pie.

DRYING CORN.

Corn, when at its best for eating, will shrink little when boiled, and when cold will shell easily with the hand. Boil fifteen minutes; cool, or nearly cool it; shell it from the cob; mingle a large quantity of fine salt, the moisture from the corn will dissolve it; place in a shallow pan; the salt extracts the water from the corn, it shrinks, and a short time in the sun finishes it. Hang it in paper bags. When used, wash off the salt, and

let it stand on a hot stove over night, change the water and heat again. The corn is as sweet as if fresh from the field. Lovers of sweet corn, try it; you will never buy the slop they call "canned corn."

FRIED APPLES.

Take nice, smooth tart apples, wipe clean and slice across the core. To one dozen apples use two tablespoonfuls of lard or suet. Pour over a cup of water when in the frying pan, cover tight and let them simmer over a moderate fire till done. Try with a fork, but do not stir them. Sprinkle over two tablespoonfuls of sugar, and serve without breaking the slices. This makes a neat and palatable dish.

PICKLED ONIONS.

Choose small button onions, as nearly the same size as possible, peel them and pour on strong, boiling hot brine; drain them from the brine; wipe them dry and put them into cold vinegar, with whole pepper, bruised ginger root, blades of mace and sliced horse-radish. Keep them covered with vinegar, close the jar tightly, and set in a cool, dry place.

PICKLED APPLES.

Three pounds of sugar, seven pounds of apples quartered and cored, one pint of vinegar. Steam the apples till a fork will go through them readily. Then make a syrup of the sugar and vinegar and pour over them while hot. Stick a clove or two into each quarter. Very nice.

PICKLED PALMETTO ROOTS.

Florida is to give the world a new condiment in the shape of pickles made from the pith or bed of the palmetto roots, which are said to be superior to cucumbers for the purpose.

TO FILL FRUIT JARS.

To prevent breaking glass jars when putting hot water or fruit into them set your jar on a wet towel or napkin folded several thicknesses together. This is very simple, easy to remember and to do, and will insure glass from cracking.

LABELS ON TIN CANS.

A spoonful of sugar in a pint of paste will make labels adhere to tin as well as to wood.

HOUSEHOLD PESTS.

COCKROACHES.

A lady inquires: "What is the best thing to drive away cockroaches? I am living in San Francisco, and my pantry is infested with them. I have tried almost everything I can hear of, but with only temporary success."

Borax is the best cockroach exterminator yet discovered. This troublesome insect has a peculiar aversion to it, and will never return where it has once been scattered. As the salt is perfectly harmless to human beings, it is much to be preferred for this purpose to the poisonous substances commonly used.

Another recipe: Take dry red lead; mix with thin molasses to a consistency of thin cream; then take pieces of glass and broken plates, etc., spread it on about as thick as thin window glass. Where roaches are very numerous, give them plenty of the mixture, as they eat very greedily of it. I think the general failure with roach poison is this: The poison is so quick in sickening the roaches that they will not eat enough of it to kill them, for they are slow eaters. The red lead being slow in its effect on them, they will get a good quantity into them before it will sicken them. I have notice when any of them would happen to be trampled upon, it would appear that they were entirely filled with the red lead. Place the lead where the roaches can get at it most conveniently. If the lead should become too dry and hard, mix a little more lead and molasses with the old to freshen it up again, and put it in different places.

RED ANTS.

Correspondents of the *American Grocer* having inquired what to do to rid premises of red ants, that paper called upon its readers for their methods. Several of them replied, a majority naming camphor gum as the best thing to use. Place in a thin muslin bag and hang up about the places infested. One has used successfully a cord saturated with spirits of camphor. Another has used elder leaves scattered about the shelves and boxes with good success.

OTHER INSECTS AND EXTERMINATORS.

Mercury exterminates fleas and bugs. Cleanliness is the best preventive. The common housefly more than compensates for its trouble by clearing the atmosphere of effluvia and the animalcules which always arise from the putrefaction of decaying substances during warm weather.

Twenty-five cents' worth of cobalt—a mineral poison in black powder—will last to kill the flies about a house for a whole year. Put a spoonful into a saucer or soup-plate and keep the dish half full of water sweetened with sugar. Set where the flies will get at it.

Birds capture a large share of the insects in the larva state, and thus the millers are prevented from depositing their eggs for future worms. As to the loss of fruit by the birds, the latter are always sure to be on hand in force in the season of ripe fruit, whether they come early to take the worms or not.

For insects that infest the vegetable garden, the laboratory of the chemist furnishes materials fatal to them all, among which white hellebore and cayenne pepper are of the most utility. The bug or worm that cannot find vegetation unflavored with these articles will seek its breakfast elsewhere and leave such a garden unmolested.

A few drops of carbolic acid in a pint of water will clean house plants of lice in a very short time.

If mosquitos or other blood-sucker infest sleeping rooms at night, uncork a bottle of pennyroyal, and these insects will leave in great haste, nor will they return so long as the air in the room is loaded with the fumes of that aromatic herb.

Common coal oil is an excellent mosquito bar. Drop a little on a piece of cotton, squeeze as dry as possible, and rub over the exposed portions of the body. The smell of the oil disappears in about five minutes, and no mosquito will alight upon the anointed places. This is said to be better than pennyroyal for the same purpose.

If rats enter the cellar, a little powdered potash thrown into their holes, or mixed with meal and scattered in their runways, never fails to drive them off.

A correspondent of the *Gardener's Monthly* says the simplest plan to use kerosene to destroy insects is to make a moderately strong soap suds and mix with it a little oil. It readily combines with suds and can be applied with a syringe. It is the best thing for mealy bugs, and may be used in dilution suited to the nature of the plant requiring treatment.

☞ We have received from M. L. H. Hare, local agent, samples of preparations of Ventura Rock Soap, which we have tried and can cheerfully recommend. We consider it without an equal.

Educational.

EDUCATION AND LABOR.

Ed. Agriculturist: The "Groundswell" complains that the "higher system of education has tended to bring labor into contempt." If the statement were not terribly true, I should resent it as an insult to educators. But is not that system only *nominally* "higher," but really *lower*, which tends to bring any duty into disrepute? What is a teacher but a laborer, and if he does his whole duty, a hard laborer?

At a time when manual labor is struggling against oppressive monopolies and the degrading sentiment of aristocracy, it is the especial duty of the teacher to stand by the right, and to inspire in the minds of his pupils a love of true republicanism—true democracy—to teach that

Honor and shame from no condition rise;
Act well your part—there all the honor lies.

No; it is not higher, but lower—the very lowest—education that tends to bring labor into contempt. The teacher whose influence tends thus to poison the minds of his pupils, is ignorant of the simplest principles of life and its duties, and should at once give place to one of more honest ideas. A Teacher.

Plain Talk to Farmers.—The farmer must depend upon two classes of help—his family and hired hands. These two classes differ, or at least they ought to differ, widely in their feelings in performing their work. The hired laborer serves for money alone, and though he is under moral obligation to perform faithfully his honest work, whether he will do it when the eye of the master is not upon him, depends upon his moral disposition and development. But with regard to the co-operation of a man's family—his wife and children—in earning a competence for all, the case is far different, or ought to be. This co-operation ought to be inspired by love and common interest, and where this is not the fact, success cannot be attained, as a general rule. Where a man receives no cordial sympathy from his wife and children in making a support for them he is crushed by a power that he cannot resist. Perhaps the keenest pang ever felt in this life, by a noble nature is the consciousness that there is no tie in the family—no sympathy with the husband and father in making a living—that wife and children are as boarders, or strangers, that they hold him as a slave, and are not even grateful for what they receive. A man who sees this spirit in his family, and does not become morose or dissipated, is made of better material than most persons. When the reverse of this is the case, where a man receives from his children the powerful—we had almost said the omnipotent—support of love and cordial co-operation, he is a demon of the pit if he withholds from them his best efforts.

The duties of the domestic institution of the several members of the family, need a more thorough exposition than the religious ethics of the day afford. The disposition to shun work, to live without it in ease and luxury, is one of the bad characteristics of the time. Our system of education is not calculated to remove this evil. The religious teaching of the age is not a remedy for it. In fact, our system of schools, or the spirit which inspires them, and the general religious influences of society, help augment the spirit of idleness and extravagance. There is a certain dash or spirit of society which renders the cordial co-operation of the farmer's family impossible. A man who has several boys who will not work steadily and heartily, has a bad chance to make the farm pay. If the community but knew the amounts of many a farmer's bill for dry goods, groceries, millinery, mantua-maker and jewelry, the secret of ill success would be apparent, yet the pride of human nature will conceal these drawbacks, and only the thoughtful among men consider this source of ruin. The fact is perfectly well known to merchants, grocers and other business men. The extravagant purchase of goods of one kind and another, eat up the profits of the farm. Nor is this all—it discourages the farmer, and casts a dark shadow over the business. The prevailing styles of living cost too much, and none but the very rich can indulge in them. A wife is not exempt from household duties and labor. A woman who feels herself to be exempt from domestic duties is not fitted to be the wife of any working man. Work is necessary to the support of a family. The wife and the mother who declines and shrinks from it, is false to her affections, false to her duties, false to the law of agricultural prosperity. The farmers' daughters should work in their department. They can raise poultry, do their own sewing, keep the house. Many of the farmers hire all the house help. Wife and daughters sleep till breakfast is ready. Great, big, ruddy sons lie abed till the sun is high in the heavens, and then go to town to spend the day in idleness. The children of many farmers in this country are idle. They are for the most part consumers, but not producers. The daughters of well-to-do farmers in these days are not so generally co-operants in making the common blessings they ought to be. Everywhere work is shirked. The popular idea of a lady or gentleman is to live in splendor without work. Why should a man not work? Can he give a good reason for living at all without work? Can a good reason be given to raise a girl without work—the work of her department? The son who will not work is unfit to live—he deserves not the privilege of life in the world. All over the country the idleness of farmers' children is a disgrace. Farming does not pay because so many dead-heads hang upon the pursuit. The extravagance of the day is a shame. The rising generation are impotent in regard to self-supporting. The young men of the country are incapable of thrift, because their early training lies in the principles of indolence. We see the sad error of our farmers; they pay for hired help and let their boys go free. The whole subject of domestic economy is ignored. We are fighting against nature—against the Author of the world and the Giver of the harvest. Is it not so?

Farming will pay if it is managed well, but industry is the law of nature; and where a family is idle, nothing but ruin can be anticipated. We want a reasonable system, a sound philosophy, a wise domestic economy, a rigid system of labor for the family, sons, daughters, wife and husband, to work to a common end—the welfare of the family. If we speak plainly, it is because we feel the importance of the subject. Human happiness is involved in this question.—*Live Stock Journal.*

☞ It wouldn't take some persons very long to bury all their friends, but Trueman & Woodrow, who conduct the undertaker's business on First street, make everybody friends by gentlemanly fair dealing, and they surely deserve the confidence and esteem of everybody.

Sheep and Goats.

Angora Goats and Mohair---Criticisms Answered.

(Continued from page 128.)

"It is now fifty years since these goats were tried in France, and they failed there. More than thirty years have elapsed since they were taken to the Atlantic States, to South America, and to the Cape of Good Hope, and in none of these places have they succeeded. They have not been taken in large numbers from Asia Minor to any part of Europe; they have not increased rapidly in Asia Minor; they have not paid enough profit to their owners to raise them out of a social condition so low that it borders on barbarism; and the supply of wool is not increasing. In and near Asia Minor is a region including Syria, Palestine and Armenia, Kurdistan and Transcaucasia, with an area sixty times as large as California, and capable of sustaining not less than 50,000,000 goats; whereas not 10,000,000 are now shorn regularly in the world."

To this we reply: The history of the pursuit shows that the first attempt to appropriate the race in Europe was made by the Spanish government, which imported a flock in 1765. This disappeared. Following this came the importation of the eminent agriculturist, President Tour d'Aigues, who introduced some hundred upon the Lower Alps in 1787, and his experiment, according to his own testimony, appears to have been wholly successful, as he declares that his flocks, without any special care, were constantly preserved in good health, and that "nothing is easier than to raise and nourish the species." This flock, together with one imported by Louis XVI. to Rambouillet towards the close of the last century, disappeared in consequence of the revolution. Better results were obtained in Spain from the importation of a flock of a hundred in 1830 by the King, and pastured in the mountains of the Escurial, where they produced "a magnificent fleece," to quote the words of M. Graells who saw the flock in 1848, when it was 200 strong, all the primitive individuals having disappeared, and those which succeeded them having been born in and naturalized to the climate, the food and other inherent condition of the central region of Spain. The same observer reports another flock of a hundred head at Huelva, also thriving. In 1854 the Imperial Society of Acclimation of France secured a flock of ninety-two head of Angoras, and subdivided it, and placed the goats in different districts. The result was not a success. "Many died, and thsse that survived gave fleeces which were far from satisfactory," says the record of the experiment. In 1858 all the separate flocks were re-united and placed in the mountains and trachytic districts of the Landi, where "the animals rapidly recovered their health and were increased without suffering any malady." The fleeces were pronounced "in admirable condition," and were fabricated into velvets of such fineness that it was declared "the wool of the Angora goat has been ameliorated in France." The increase of this flock was disastrously checked by the rigorous winter of 1859 and the rainy and damp summer which succeeded. M. Richard, writing of the experiment, says: "The goats, always in a damp atmosphere, eating wet grass, contracted as well as the sheep an aqueous cachexy; a third of the animals succumbed from this malady. * * * * The malady was arrested by a tonic and fortifying medication." The flock reduced from ninety-two head in 1855 to seventy in 1862, was at the latter period in good health.

So much for the experiments with the Angora in Europe, which, while not encouraging in all respects, are by no means the failures the *Alta* would have us believe. A useful lesson is to be learned from these experiments, viz: the destructive effect of exposing the Angora goat to a damp climate. This fact is well known among experienced American breeders. To this danger the Angora is not exposed in California.

2. Only about twenty-seven years have elapsed since the advent of this goat in the United States. It was first introduced into South Carolina (not into the "Eastern States," as the *Alta* declares) from Turkey in 1849. From that period up to 1866 no further noteworthy importations were made. It has only been fifteen years since the Angora's first appearance on the Pacific Coast (summer of 1861). In no section of the country was there any extensive and vigorous prosecution of the industry previous to 1866; so that the business, *as a business*, is not thirty, but only ten years old in America. What was the now great Merino sheep interest at the end of ten years from the first introduction of that race into the United States in 1812? and what would have become of it had it been brought up for judgment and condemnation, without a fair trial, in 1812?

3. As to the Cape of Good Hope:—When the Dutch planted a colony at the Cape, they took a few Angoras with them; but during the subsequent war the goats were permitted to run at will with the common goats of the country until the pure stock was lost—swallowed up by promiscuous breeding with the numerically superior plebeian race; not, however, before almost the entire goat stock of the country had become mixed with the Angora blood, so powerful is it for the reproduction of its kind. But the amount of fine blood being altogether disproportioned to the common, owing to the fact above stated that the common stock so largely out-numbered the Angora, no results in fleece were obtained worthy of mention. This is doubtless the failure to which the *Alta* refers, forgetting later facts. The goat herds of the Cape remained in this condition until 1866, when the increasing demand for mohair induced some enterprising Englishmen to ship 400 head of Angoras, mostly bucks, to the country from Asia Minor. About half of these were lost in transit. The remainder were put where they would do the most good, having been thrown among the low-grade ewes of the country for breeding purposes. From time to time since that date (1866) there have been perhaps, in all, six hundred more pure Angoras landed at the Cape by English breeders. What is the result? The Cape now exports over a million pounds of mohair annually, which is regularly quoted in the Liverpool market—all the results of ten years' operations from almost a first beginning.

The exportations of mohair from the Cape of Good Hope to England are given in the commercial statistics as follows:

In 1867	49,000 lbs.
In 1867	97,000 lbs.
In 1869	147,000 lbs.
In 1870	450,000 lbs.
In 1871	1,000,000 lbs.
In 1872 (estimated)	1,500,000 lbs.

The exports since 1872 doubtless show the same ratio of increase, though the figures are not at had at this writing.

If this Cape of Good Hope experiment is a "failure," we should like to see some more failures of the same kind happen in this country.

4. We have no record of any considerable or intelligent experiments with this goat in South America, but have a brief account of their introduction into the colony of Victoria, Australia, in 1856, accompanied by statements that they have thrived there, and have spread to other prts of the continent, where they are now found in fair numbers—notably in the neghborhood of Sydney—producing a fair quality of mohair.

5. If Angora goats have not increased rapidly in Asia Minor, as the *Alta* asserts, there is abundant cause for it in the terrible famines which have afflicted that unhappy country from time to time for years, forcing the starving people to eat their goats or die themselves. The devastating famine of 1874 has not been forgotten by America, though it seems to have been ignored by the *Alta* in its zeal to make a point against the mohair interest. Here is a single paragraph—a compilation in the New York *Sun* of November, 1874, from the Turkish news of that fearful period—that will show better than columns of argument what has become of a large share of Asia Minor's mohair crop. (We think the original publication was probably made by the *Levant Herald*):

"It is estimated that the people who have fallen victims to the famine in Asia Minor number over 150,000. As an instance of the terrible devastation among the cattle and flocks, it is stated that in one village, out of more than 1,600 sheep and goats, just one sheep and one goat remain, and of 100 cows two remain. In another, from a flock of 1,200 sheep and goats, 8 are reported; and from another flock in the same village, numbering 800, of which 700 are mohair goats, the same number, 8, is reported."

This wholesale devastation, it will be observed, was all in two villages. An estimate, made at the time, of the entire destruction of Angora goats in the whole territory of Asia Minor footed up the enormous total of half a million (500,000). And it must be borne in mind that this loss of the precious race was not from disease, but because of famine among the people, causing them to kill their favorites in order to preserve their own lives. Will not the *Alta* admit that there has been some reason why these goats "have not increased rapidly in Asia Minor" in late years?

6. The fact that the people of Asia Minor are in "a social condition so low that it borders on barbarism," instead of being an argument against the profitableness of goat-raising, is strong proof of the incapacity of those people for making this valuable animal yield those large results of which it is capable in the hands of an enlightened people, employing scientific systems of breeding and approved methods of culture. The people of Asia Minor *are* semi-barbarous; nevertheless the mohair goat is their chief support in many districts, and the purest leads all others there, and has done so for more than a century; hence it must be a success, or it would long since have fallen into the back-ground.

7. We consider it hardly necessary to go into a consideration of the inscrutable reasons why that distant and rather shadowy region, that sort of *terra incognito*, "including Syria, Palestine and Armenia, Kurdistan and Transcaucasia, with an area 60 times as large as California, and capable of sustaining not less than 50,000,000 goats," has not got that number, which we freely admit to be the case for the sake of the argument. You might as well ask why the Old Harry the Digger Indians haven't got 50,000,000 thoroughbred Short-horn bulls; and then proceed to argue elaborately and exhaustively that thoroughbred Short-horn bulls are a fraud, a delusion and a failue. But if the *Alta* will just quit that kind of wild figuring and come down in good honest faith to the possibilities within reach right here in California, and help work them out, the editor may live to see this mohair business assume such dimensions that the 10,000,000 goats which he asserts are not now shorn in the world will be clipped here, in the Angora's natural home, on the slopes of the Pacific.

To wind up with, the *Alta* practically surrenders its entire position by publishing the following well-authenticated facts—being some of the practical results in the breeding of Angora goats which have been achieved in California;

"Against this array of facts we have the assurance of several persons that the animals of pure, or nearly pure blood, in this State are hardy, increase rapidly, and yield heavy fleeces of wool, commanding a high price in the market. It is reported that Stockton & Buffum, who have a herd of 550 goats, including 36 of pure blood, near Hornitos, Mariposa county, obtained a ton of wool for last season's shearing. From the California Agriculturist we clip the following figures and remarks about their goats:

"'One pure-bred ewe sheared 7 lbs; one 31-32ds ewe's fleece weighed 7 lbs; a 15-16ths ewe sheared 6½ lbs; a 7-8ths ewe sheared 4½ lbs; five 7-8ths ewes sheared 18¾ lbs; three 15-16ths sheared 17¾ lbs; two 31-32ds ewes sheared 13½ lbs; four pure bred ewes sheared 25¾ lbs. One of their pure bred bucks sheared 7½ lbs, and a pure bred buck kid 3½ lbs, while a grade kid sheared 4½ lbs; twelve kids sheared 39 lbs of fine mohair: three pure bred bucks sheared 20 lbs. But the most remarkable fleeces were the wethers'. One wether sheared 9¼ lbs! ten wethers sheared 76 lbs fine mohair. We must make special mention of the produce of wethers. Evidently they will make the best mohair. The expenditure of vital force incident to breeding, caring for and nursing the young detracts from the fleece production of breeding animals. The wethers keep in more uniform and better order on the same feed, and their fleece is not only fine and heavy, but uniform in texture during its growth the entire year.'

"The same paper obtains the following figures about pure-blood fleeces from C. P. Bailey, who has a herd near San Jose:

"'Buck Romeo 2d, five years old, eleven months' growth of fleece, 8½ lbs; a two-year old buck, one year's fleece, 7½ lbs; ewe, Scotch Woman, six years old, twelve months' fleece, 6½ lbs: ewe, Queen of Monterey, three years old, twelve months' fleece, 6 lbs; ewe, two years old, 5¼ lbs. The above fleeces are worth $1 per pound net. From a flock of 1000 young goats, one and two years old, were sheared 1600 pounds. These were grades from 7-8ths to 31-32ds, and the fleece will average worth 60 cents per pound. Mr. Bailey says that he can get as good results from 31-32ds and 63-64ths as from pure breeds.'"

These few figures have more good square, convincing argument in them than all we and the editor of the *Alta* together have said on the subject. The logic of results is irresistible.

Improved Breeds of Sheep.

As the season of fairs is a good time to compare the different varieties of stock, we copy a portion of an essay read by Dr. L. E. Brown before the Kentucky

Wool Growers' Association, in which brief reference is made to the history and value of the leading and most popular breeds of sheep:

First—The Merino is a breed originally Spanish, but now generally existing over Europe and the United States, and very extensively in Australia. Merino wool constitutes a great part of the wealth which flows into the new continent from its exports. The Merino has large limbs, and the male has large spiral horns which do not rise above the head. The skin of the neck is loose and pendulous, the cheeks and forehead bearing wool. The fleece is fine, long, soft and twisted in silken spiral ringlets abounding in oil which, attracting dust, gives it a dingy appearance until scoured, after which it is silky and white. This variety fattens slowly and is valuable mainly for the excellence of its wool, but as a general thing, has not been found profitable in England or the United States, and is not reckoned by some as being strictly one of the long-wool sheep.

Second—The Leicester sheep is regarded in Europe as one of the most valuable of the long-wools. This breed, in the present improved condition, is the result of the skill and care of Mr. Bakewell of England, who, soon after the middle of the last century, began to make experiments for the improvement of the old Leicester sheep. It was then a large, coarse-boned sheep, not easily fattened, with coarse wool weighing about ten pounds to the fleece. The new Leicester, or present breed, has wool moderately long and of better quality, weighing seven or eight pounds, and is easily made very fat. The color is white, and both sexes are hornless with bald face tinged with blue, and low carriage. Other breeds of long-wools in England have been greatly improved by crossing with this—the Lincolnshire, Romney Marsh, etc. In this country the Leicesters are large and coarse, but easily fattened and with good mutton, the wool moderately long, but stiff, and without gloss. Altogether this variety is not generally held in great esteem.

Third—The Lincolnshire is a large, bony animal, takes longer to mature, has a long, flat, bony head quite bare of wool, with a good fleece, rather thin, slightly kinky with some gloss. But although the Lincolnshires have been greatly improved in late years, their legs being shorter and the wool more glossy, yet the fleece not being equal in quantity or quality to that of some other breeds, they have not met with general favor, and are rarely adopted by our wool growers as a breed.

Fourth—The Southdown is one of the most popular breeds both in Europe and the United States, and have, by crossing, produced what are called Hampshiredowns, Shropshiredowns, Oxforddowns, and perhaps others, all larger and coarser, but retaining the Southdown marks and characteristics, all producing valuable wool and making good mutton. But the Southdowns must be regarded as at the head of all these, both for wool and table use, the crossing of this breed having added nothing to the originals in either quality. The Southdowns are exceedingly neat in form, both in head and body, with gray face and legs, forehead and legs well covered with wool, the fleece short, thick and soft, the outer surface often appearing as smooth as the nicely clipped. The body is straight, with well-sprung ribs, broad, level back, and deep flanks, all well covered with wool. This breed stands at the head of all the breeds of sheep for superior table qualities, but does not rank so high for quantity and quality of wool. The Southdowns derive their origin and name from the Chalkdowns of the south of England, but are not adapted to a cold climate.

Fifth—The most important and valuable of all breeds of sheep is the Cotswold or Gloucester, the wool of which has been held in great esteem since the fourteenth century, and has generally commanded a higher price than any other. In 1464 Edward IV. of England, sent a present of Cotswold rams to Henry of Castile, and in 1468 he sent a similar present to John of Aragon. So the Cotswolds reach back to a right honorable age and right royal patrons. But in modern times the Cotswolds have been greatly improved by crossing with the Leicester, producing a shorter wool and better mutton than in former times. The Cotswold of to-day has a long, straight body, well rounded ribs, flanking low down, good full twist, broad, flat back, full and low in brisket, a neat, stylish head, broad between the eyes, neatly tapering mouth, short legs, with head, jaws and legs covered with wool, and altogether a pretty and stylish body, covered with long, fine, wavy wool, which is glossy and very valuable and in great demand. The face in this breed is sometimes gray, but not generally so. They are more docile than any other breed, and take on flesh very kindly, making good mutton, but are not considered in this respect equal to the Southdowns. Yet, all things considered, the Cotswold is the best and most profitable breed for the wool growers of Kentucky, and we would earnestly advise them to continue to improve their flocks until they shall be as near thoroughbred as possible. It costs as little to raise and take care of a good animal as an indifferent one, while the thoroughbred will yield a fleece of from twelve to twenty-five pounds, worth twice as much per pound as the fleece of a common sheep, which would weigh three or four pounds.

Stock Breeder.

AGRICULTURAL FAIRS.

AGAIN the season of annual fairs approaches, and it seems a fit time to discuss the subject. Farmers, after the season of hard work in the harvest field, need some recreation, and generally attend the fairs, though they seldom have much to do in the management of them. If they did have more to do with their conduct it would undoubtedly be better for all concerned; there would be more of the useful and less of the sportive element brought to the front. The design of the city managers is to bring together a crowd and get the people to spend the most money possible. The *success* of a fair is counted by the amount of money that can be collected from the crowd that attends the fairs. The *economy* of the matter consists in spending the least money possible to obtain the most returns. It is a sharp piece of figuring to so arrange the premiums and purses as to give satisfaction, or at least, the least dissatisfaction, and draw the crowd to spend money.

Now, our notion may be old fogy in the opinion of a jockey sharp, but we think that if the farmers and industrial masses would take the thing into their own hands, and make the fairs successful in developing the utmost good, and instead of trying to get people to spend money in demoralizing horserace gambling, would encourage them in true economy, and in making efforts to improve in every industrial pursuit, it would be just as agreeable to visitors, and much more beneficial to the whole community. There is need enough of improvement and reform in fair management. We remember how fairs used to be conducted in New England, in the farmers' own interests, and would like to see the good old times copied from, if they cannot be improved upon. We wish we had no occasion to grumble, and will copy from an English paper what it says about the cattle show season:

The local cattle show, in its way, is an important institution, stimulating the breeders of the district to improve their stock, each in gentle rivalry trying to outvie his neighbor. It is at the cattle show, when his horse, cow, pig, or sheep stands alongside his brother-farmer's animals, that he finds out the failings and virtues of his own stock, and then goes homewards with a determination to go on improving its type and general character. Though, perhaps, beaten, he is not quite vanquished while he lives to fight another day.

To the healthy influence of competition at cattle shows, we must greatly attribute the present fine, improved character of our flocks and herds. In the exhibited animals the breeder sees what points to avoid or to cultivate. If he determines on making a mark himself, he does not fail to procure the blood of some winning strains. He cannot well do it without. Other laborers, however, have been in the field, and he enters upon their harvest. It would be folly to attempt to perfect an old unpedigreed strain of Short-horns, whilst the work is already to hand in a far advanced stage, from which the breeder may at once take his starting point without loss of time It is this consideration which puts a somewhat fictitious value, apparently, on the strains of cattle, horses, and sheep which have made special character and the power of transmitting their best qualities to their descendants. It is not the value of the individual animal as a food producer or as a breeder of ordinary stock for sale to the grazier or butcher, but its potentiality for good for generations to come that makes it a much coveted prize. The many years of skill and science also spent in developing the strain, the costly experience gained in the face of many difficulties, all go to render highly-bred animals valuable. Were it otherwise, fancy prices would be ridiculous. The cost of producing stock is necessarily included in their market price—following a common law of commerce. Thus prices that sometimes appear sensational are frequently but a natural result of time and treasure sunk in forming the special type, which, if broken, would take a generation to repair.

To all, and especially to the farmer, these exhibitions of stock and farm implements are educational. It is therefore satisfactory to find them ever increasing in popularity. The influence they exert on modern agriculture must be great. They are deserving of every support, and we trust the present show season will be as pleasant and successful as that of any previous year.

Buffalo Bones. A few years ago, none but the very tit-bits from the carcasses of these monarchs of the American plains were thought worthy of the hunter's notice, and after stripping them of their skins, these huge masses of wholesome flesh were left on the prairies to rot in the sun or to be devoured by the carnivorous beasts and birds that abound there. Now, however, owing to the wanton slaughter that has been carried on during late years, a herd of buffaloes is a most unusual sight in places where, within the memory of those who are still young, myriads of them passed and repassed on their route to pastures new at various times of the year. Now, also, according to the *Scientific American*, not only is the carcass itself utilized, but the bones form the source of a profitable business among the settlers in Kansas. The prairies, for forty miles each way from the railroad, have been gleaned over till not a relic of the chase can be found. Heads and ribs are worth $5 a ton; these are shipped to Philadelphia and ground up into fertilizers. Shins and shoulder-blades are worth $10 a ton; these go to the sugar refineries. The horns are worth $30; the tips are sawn off here, and sent to the factories of umbrellas, fans, pipes, etc. The remainder is used by the chemists. Bits of hide found hanging to the heads are taken off and sent to the glue factories. Every fragment of these animals is made to serve a purpose.—*Land and Water.*

Animal Parasites.—At a recent meeting of the Stowmarket (England) Farmers' Club, a paper upon animal parasites was read, from which we extract the following. Doubtless the greater part of our yearly losses of stock is caused by diseases which result from parasites, to say nothing of the danger of using the flesh of affected animals for food:

In carnivorous animals the tapeworms possess rows of hooks in the head, as well as suckers. In herbivorous animals, such as oxen and sheep, they possess suckers only. With this difference, which was simply an adaptation to different conditions under which food passed into the alimentary canal, the life history of all tapeworms is similar. The head is in reality an animal, for it is possessed of suckers or hooks, and has begun to bud into one of the well-known joints. The budding process takes place next to the head, so that each joint is thus pushed a step further along to the intestine. This continues until the whole of the intestines might become completely charged with those joints. The joints are connected by a kind of canal down each side. The interior of each joint is filled with a large branch ovary. When the joints are dead, the skin decomposes and the ovary is thus liberated. A tapeworm has often been known to extend to sixty feet in length, especially among those of the ox, and possessed more than 1,100 joints, and each one of these tapeworms developed many millions of eggs it was not surprising that the eggs were found almost everywhere, being blown about by the wind in this dried up condition they possess an amazing vitality, remaining uninjured perhaps for years. Should a pig, an omnivorous feeder, partake of food in which some of these eggs were contained, they would be conveyed into its stomach, where they would be converted into larvæ, and would after a short time bore their way through the pig's stomach and get into its muscles. There they would be quiescent, and assume a condition like the crysalis; this condition is called encysted. Pork killed in this condition is said to be measled, and should it be cooked without the larvæ being destroyed, and partaken of by man the encysted larvæ would then develop in man into the tapeworm. The tapeworm of dogs is of a very peculiar kind, and for a long time it was a matter of wonder how the creature got into the stomach of the dog. Now the secret is out. Sometimes when dogs affected by these worms went near sheep, the sheep also suffered from them. When in the stomach of the sheep they bored their

way through until they finally got into the brain, where they became encysted, and in this condition they caused the disease among sheep well known as the staggers. Man himself sometimes suffers from the encysted larvæ, which produces a disease called hydatids. Sheep were also affected by another parasite belonging to a different order from that of tapeworm, called flukes. These creatures possess a different internal organization, and attach themselves by means of suckers alone. Each worm was hermaphroditic and their presence produced the well known sheep rot. The eggs of the sheep fluke were blown about until they sometimes found their way into the water, where they swam about like microscopic organisms, and even become parasitic upon fresh water mollusca. It is undoubtedly because of sheep drinking the water in which the larvæ are present that they become affected by them. Lambs and sheep are also affected, especially the former, by round worms called *nematods*, especially by one form called *stongylus*, and the disease which the presence of this form gives rise to is called hoose or husk. It is generally to be met with in the bronchial tubes or throats of young lambs. It also gets into the interior of the heart or lungs, where it becomes encysted, and produces tubercular disease. When the *nematod* forms become encysted in man they produce a disease resembling rheumatic fever called *trichinosis*. When they are encysted in some animals, as in pigs, they are called *trichinæ*. In some instances these intestinal worms were not considered injurious; for instance, the Abyssinians never considered themselves healthy unless suffering from tapeworms. The dung of cows is frequently full of tape-like forms, although the cows do not seem to be suffering from any ailment. Some sheep are affected by parasites, yet nevertheless they yield prime mutton. It would seem from what is already known of the life history of these parasites that the danger arises from their excessive development.

Whistling Men are Kind to Animals. An old farmer once said to us that he would not have a hired man on his farm who did not habitually whistle. He always hired whistlers. Said he never knew a whistling laborer to find fault with his food, his bed, or complain of any little extra work he was asked to perform. Such a man was generally kind to children and to animals in his care. He would whistle a chilled lamb into warmth and life, and would bring in his hat full of eggs from the barn without breaking one of them. He found such a man more careful about closing gates, putting up bars, and seeing that the nuts on his plow were all properly tightened before he took it into the field. He never knew a whistling hired man to kick or beat a cow, or drive her on a run into the stable. He had noticed that the sheep he fed in the yard and shed gathered around him as he whistled, without fear. He never had employed a whistler who was not thoughtful and economical.

Colorado Stock Ranges.—Strangers make a great mistake when they look over the plains and call them unproductive and worthless, for what they think is barren is far from being so. If the pastures of the plains on which cattle are grown and made fat were represented by such meadows and cornfields as in the States are required for those cattle, the stranger would, like Timon, "see another sight," for they would stretch far and near and mile after mile in verdant green; and they would be the result of thousands and thousands of days' labor of men, and tens of millions of dollars of invested capital. But instead, all of this comes free; it is a wide domain of grass, owned by the government, which is possessed and utilized without the investment of a dollar or the expenditure of an hour's labor by man or beast, and it is presented not only through the spring, summer and fall months, but also through all the winter months; in fact there is not a day in the whole year in which cattle are not feeding on the the range. People in the States cannot understand this, for, as Burns says of the immortality of the soul, "it is almost too good news to be true." Still, such are the facts, and the amount of clear income to Colorado from this source is, to the whole people, greater than the income of any people in the States from the highest cultivation of the best soil. —*Greeley (Col.) Tribune.*

International Live Stock Exhibition.—The live stock show will be made in serial order, commencing with horses, Sept. 1st to 14th; dogs, Sept. 4th to 8th; neat cattle, Sept. 21st to Oct. 4th; sheep and swine, Oct. 10th to 18th; poultry, Oct. 27th to Nov. 6th. No charge will be made as entry fee, nor for the use of stalls, which will be of first-class character in all respects.

The stock yard is of sufficient area to allow the construction of 700 box stalls for horses, each fourteen feet square, these to be afterwards divided for cattle, by longitudinal partitions into 1,400 stalls, each 7x14, all of ample elevation and security.

The stock yard will be thoroughly well watered, and lighted by gas, and under the constant charge of a company of Centennial guards. Exhibitors, or their agents, will be required to assume the entire charge of horses, neat cattle, sheep and swine, and be alone responsible, although the Commission will do all in its power to provide for the comfort and safety of the animals. Hay and straw will be furnished by the Commission free of charge. Roots and grain will be sold at actual cost. Each breed of well established character in the various families of live stock will constitute a distinct class, under which awards will be made as provided for in classifications.

Holstein Cattle.—There is, perhaps, the least known about this breed of cattle of any in the country, and especially is this true of the West. The first we heard of them in this country were the importations by Dutch emigrants along the Hudson and its tributaries in the early settlement of New York. English stock writers give us precious little concerning this breed. The fact that the Holstein breed is capable of transmitting with undeviating certainty, constitutional characteristics to their progeny, is proof that they were bred with great care, perhaps more than a century ago; for it is well established that it is only by fixed, continuous, and systematic breeding for a great period that any breed obtains this power.

As a breed they excell as milkers. Invariably they are black and white in color and are reckoned among the best dairy breeds. A Mr. Le Roy, of New York, imported in 1823, some of these cattle, and they were afterward taken by his son to the Genesee valley in that State. They were remarkable for the yield and richness of their milk. But they in a few years crossed with the Shorthorns, by which the purity of the breed was lost. It was from this that the fine grades so much esteemed in parts of Orange county New York, sprang. There are at present in that section of the State, some of these Holstein grades, which scarcely have a superior for the butter dairy any where in this country.

The only pure bred Holsteins of which we have any knowledge in this country are the get of those imported by a Mr. Chenery, of Boston, Massachusetts, in 1861, and placed on a farm near that city. This importation was certified by official authority in Holland as being pure. A four year old bull 2,465 pounds, height five feet. The cows imported averaged each 1,325 pounds. One of the cows by test of six days' milk produced seventeen pounds fourteen ounces good butter. As a dairy breed, they equal any known. For beef, though heavy, they have not been tested long enough to determine their relative merits with other breeds.

Col. Wm. Cunback, of this State, we hear, is about to make a purchase of some Holstein cows, to give them a trial. We note this fact with pleasure, as we should like to see them introduced into the West, and tested for dairy purposes. We hope to have a description of these new-comers when they arrive, as well as a report of their qualities.—*Indiana Farmer.*

Beans can be used instead of corn for fattening cattle and sheep, and are so used in England to a very great extent. Chemical analysis makes them equal to oil-cake in fattening properties, and they are better than corn for growing animals —having greater proportion of nitrogenous, or flesh-producing properties. Morton's Cyclopedia gives the average product of an acre of good land, well tilled, at thirty bushels, of 66 pounds each—1,980 pounds in all. In this there are 460 pounds of nitrogenous, or flesh-forming substances; 1,168 pounds of heat (or fat) producing (970 pounds of this is starch), and 352 pounds water and mineral substances. Beans are always fed in the shape of meal, and are much used for horse feed as well as for cattle and sheep.

To Determine the Weight of Live Stock.—Measure in inches the girth around the breast, just behind the shoulder-blade, and the length of the back from the tail to the fore part of the shoulder-blade. Multiply the length by the girth (in inches), and divide by 144. If the girth is less than three feet, multiply the quotient by 11; if between three feet and five feet, multiply by 7; if between five and seven feet, multiply by 23; if between seven and nine feet, multiply by 34. If the animal is lean deduct one-twentieth from the result. Another rule is, take the girth and length in feet and multiply the product by 336, and the result will be the answer in pounds. The live weight multiplied by 605 gives a near approximation to the weight.

The Farmers Loaning Wheat.

The wheat buyers of California are a clever set of fellows, and withal shrewd business men. We have heretofore shown up the combination that exists among them, constituting one of the most formidable business rings in the State. Formidable, because possessed of immense capital to operate with, and controlled and managed by men of great experience in the business, and holding within its control all the machinery and mediums of correct and latest market news. This ring or combination has practically held the monopoly of the wheat exporting business for this coast since wheat has become an article of extensive production for export. It also, to a great extent, has the control of the carrying trade in wheat from this coast to Europe and all other parts of the world. With all this experience, and all this capital, and all these facilities, the ring can fix the price of wheat almost at will, and can regulate the profits of the farmers almost to a dot. It is true the farmers have at times made some efforts to get out from under the hand of this ring, but have always failed, and after each effort have found themselves more completely hedged in and bound down than before. As a natural consequence, at each successive failure of these efforts the grain buyers have become more conscious of their strength, and have exercised their power with more boldness and audacity. The manner in which they are managing the wheat market this year is an evidence of their conscious strength, and of their disposition to use it to their own advantage. Possessed of unbounded means themselves, they have invented a plan by which they can do business without the use of these means. They are now operating on the capital of the farmers—the wheat raisers of the country. They are loading ships with wheat and dispatching them for the European markets without having a dollar of their own money invested in that wheat, and by this same operation are completely destroying all demand for wheat for export at any price. And the strangest part of this transaction is, that they have got the farmers to become parties to and promoters of the whole scheme, notwithstanding it is all done at their expense and to their great disadvantage. The operation is this: The grain buyers, through their agencies, which are located in all the wheat growing sections of the State, ascertain as nearly as may be the amount of wheat to be exported. They then get control of the necessary shipping to carry this wheat to market. They then fix upon a price for wheat alongside the vessels, which, of course, is low as compared to the European market price. This price they cause to be quoted in all the commercial papers of the Bay City, and the same is copied into all the local papers of the State. In connection with this quotation, however, they manage to have it stated in all cases that there is little or no demand. They then instruct their agents throughout the country to keep and represent wheat as dull and not wanted at any price—that is, they are not wanting to buy. For the accommodation of farmers, however, who have not the means of storing all their wheat, they will take all the wheat that may be offered—that is, they will borrow it of the farmers, and will agree that within a certain stipulated time they will, on demand, return an equal amount of wheat or will pay for the same then market price, at the option of the loaner, the farmer. Thus the wheat buyers, all of whom are combined and interested in the operation, are managing to get possession of large quantities of wheat without the investment of a dollar of their own money, and with it to fill their orders and supply the European demand, while the farmers in their ignorance and innocence work on and wait for wheat to rise so they may demand a return of their loaned wheat or its equivalent in gold. And so they may work and wait in vain, for what is there to produce a rise in wheat under the circumstances? The real demand for export has been supplied, and the ring of wheat buyers, with the money in their pockets, are masters of the situation. They don't want to buy wheat, and there are no other buyers. They already have the farmers' wheat, and the money for it, and of course wheat will remain dull and the prices rule low. The wheat ring will not be in any hurry to part with the

money they have obtained in this way, nor will they be anxious to put up the price of wheat, but the time will come when the farmers will be under the necessity of realizing something for their crop to pay expenses and debts, and just about that time wheat will be mysteriously very dull and low, and then the ring will profess to have plenty of wheat and will be anxious to return all they borrowed. As a compromise, however, and to get out of the scrape they have got into, they will give the farmers the money at present rates, and just to accommodate them, though they do this at a sacrifice.—*Record-Union.*

The Dairy.

Song.

BY CHAS. KINGSLEY.

"O Mary, go and call the cattle home,
And call the cattle home,
Across the sands o' Dee!"
The western wind was wild and dark with foam,
And all alone went she.

The creeping tide came up along the sand,
And o'er and o'er the sand,
And round and round the sand,
As far as eye could see;
The blinding mist came down and hid the land;
And never home came she.

"Oh! is it weed, or fish, or floating hair—
A tress of golden hair,
O'drowned maiden's hair,
Above the nets at sea?
Was never salmon yet that shone so fair,
Among the stakes on Dee."

They rowed her in across the rolling foam,
The cruel, crawling foam,
The cruel, hungry foam,
To her grave beside the sea;
But still the boatmen hear her call the cattle
Across the sands o' Dee. [home

Plain Words About Milking.

A FRIEND of ours recently purchased a tub of butter for family use which turned out to be so tainted with the filth of the cow barn as to be entirely unfit for the table and could not be used for culinary purposes. This butter was of good color and texture, and was so well made as to have commanded the highest price in market had the flavor been perfect.

A merchant recently showed us a few cheeses which he had purchased to supply customers who desired something choice. The cheese was well made, very rich it fat, but it had a well-marked taste of the cow stable, and customers who had taken one piece wanted no more, as it was unfit for the table. These are by no means exceptional cases. Our attention has been called to like cases over a wide extent of country in the dairy districts, and we are quite certain that large amounts of both butter and cheese are injured from this cause alone, and which would otherwise take the place of a first-class article.

At the late meeting of the American Dairymen's Association, Mr. Robert McAdam, a well-known factoryman and cheese expert, gave an account of the various kinds of filth which he had found in the factory strainer after receiving milk from his patrons. And yet some people wonder why progress is so slow in improving the flavor and character of our dairy products. At this time, when prices have depreciated and are unsatisfactory, it behooves dairy men to make every effort possible for improving the flavor and quality of their goods. The responsibility must not be shifted wholly upon the manufacturer. In most cases it lies back of this, and rests with the dairyman in the management at the farm.

The defect to which we have alluded comes from uncleanliness in milking; and especialy is this the case during spring and fall, when the cows are more or less confined to the stable. Some dairymen, even if they do not themselves milk upon their hands and wet the teats of the cow before commencing to draw the milk, they allow those in their employ to do so, and the result is, more or less filth drops in the pail to taint its contents. It is a very nasty practice, and should be guarded against in the most rigid manner.

If a cows bag is besmeared with dung and dirt, it should be washed with water and wiped with a cloth, and then the operation of milking should be done with dry hands. A person who has once adopted the practice of milking with dry hands finds the milk can be drawn quite as easily and rapidly as by constantly wetting the hands; while the latter practice must always result in more or less filth falling into the milk to give it a taint of the stable and thus injure the product which is manufactured from it.

This story of cleanliness has been very often urged in connection with other advice on the dairy; but it needs to be urged much oftener before it will be properly heeded. One great fault complained of in American cheese is its defective flavor, and there can be no doubt that if taints could be traced directly to the cause, they would often be found to come from the source we have named. If taints are so distinct and pronounced as to leave no doubt as to their origin in stable filth, there cannot be much doubt but that there must be various gradations of this taint affecting the flavor of cheese according as the milkers have been more or less clean in their milking.

This question was never more important than now. The low price of dairy products requires more attention to the details of handling milk at the farm, higher skill in manufacturing and curing our dairy products, so that we may put a better article before consumers at home and abroad and thus make up the loss so far as possible caused by depreciation of prices.—*Rural New Yorker.*

Sour Milk Cheese.—An apparently rich, meaty cheese was exhibited at the last meeting of the American Dairymen's Association, by J. M. Jocelyn, of Cattaraugus county, made of sour milk and buttermilk. Much inquiry has been made as to the process by which this cheese was made, and some blame has been thrown on Mr. Jocelyn, for making a "full skim" cheese in such a manner that consumers might be led to suppose that they were eating full milk cheese. In answer, Mr. Jocelyn writes to the Utica *Herald* as follows:

I have formed a theory that the office of the fat of the cheese is no benefit to it as an article of food, except to keep it soft and meaty, and really the caseine is all that is valuable as food. Now, if a cheese can be made with still less grease and a correspondingly larger amount of caseine, the producer and consumer will be greatly benefited thereby, as nearly all the cream can be used for butter, and the cheese can be sold for a lower price, and be more valuable to the consumer than the cheese he now pays more money for, that is, full cream cheese. After various experiments I adopted this theory and carried it into successful operation. I set the milk long enough for the cream to sour before skimming, thus making more and better butter; then churn and mixed this sour buttermilk with the sour skim milk, and the acid has destroyed the fibre in the milk so it will make a tender cheese. Now, if I proceed in the old way I will have a mess of Dutch cheese; but instead, I heat up rapidly, and when at the proper temperature, I add alkalies sufficient to neutralize the acid and saponify the remaining grease in the milk, so that I have a smooth curd, a clear, green whey, and as my curd goes into the hoops it is no more sour than one that is made from sweet milk. The secret of this cheese remaining so soft and being so durable, is owing to the saponification of the fat, it being thus evening distributed among the minutest particles of the cheese, and being saponified, it never can become rancid; and as I have said repeatedly, this is the most durable and wholesome, and, to my taste, the most delicious cheese that can be made.

Profitable Cows.—It is far from economical to keep poor stock of any kind, poor cows especially. In a dairy herd, some cows will far more than pay for their cost of keeping, while others not only fall far short of this, but entail an actual loss from year to year, and this will often go on indefinitely because no accurate measure and weight of product is kept, and their relative value is not ascertained. In a cheese dairy, for instance some of the best cows will yield seven hundred pounds of cheese a year, while others in the same herd will not yield over two hundred pounds. But in how many cases will this deficiency be found out and remedied? In a butter dairy the loss from poor stock will often be even more marked. Some cows give milk which is rich in butter while that of others is very poor. Both milks are put together and the poor quality of one is not found out perhaps, for many months. The same food is given to one cow that is given to the other, and the cost is about the same, but if the real facts were known it would appear that all the profit came from the one cow, while the other was entailing a constant loss. We ought to be more careful in this respect and select our stock with greater reference to quality. A careful examination in this direction would discover some of the worst kind of leaks.

Again, cows are often kept beyond their prime, when they are no longer very serviceable, and should have been culled out of the herd and sent to the butcher or got rid of in some other way. —*Mass. Plowman.*

That's the Way.—"We knows the public is down on us," remarked the old milkman, as he dipped out the desired quart from one of his big cans, "but the public is mistaken. In the first place we put in a little water—only a bit, to make up for shrinkage. It goes to the big dealers, and they ain't a bit keerful when they gits to pouring in water. They sells it to the grocers, and they put in chalk with one hand and water with the other, and they are thinking of politics, and get in too much. The servant girl goes after milk for the family, drinks a third of it, and she puts in water to make up the measure; and, you see, when the family gets it, the taste ain't there, the look ain't there, and they goes for us poor men who hasn't a dishonest hair in our heads. That's the way, mister. Gee up there, Homer."

In all my observation, the man who gives full feed with care, gets the best pay for what he does feed. I am fully satisfied half feed does not pay, and irregular feeding does not pay. If you want your cow to give a good mess, and that steadily, give her something to make it of. If you economize and cut down the cow's rations, she will as surely cut down your supply of milk.—*Ex.*

A Cheap Milk House.—I will give the description of a cheap milk house—such as any one can have if they will. Grandfather's is of hewn logs; the foundation of stone, one foot below the ground surface and six inches above, laid in lime and sand. The building is ten by twelve feet, one story high, chinked, and after standing one or two years to settle, was plastered inside and out with lime and sand. The roof, of shingles, extends some four feet over the door; banked a few inches all round to keep dry. Ground floor of nice, clean gravel, got at the creek. A floor is laid overhead of plank, to assist in equilizing the temperature. The receptacle for crocks is a trough made of two-inch plank, water-tight reaching full length of the building from outside to outside. The water enters from a lead trough four feet long, at left of the door, and goes out at the other end; after running some fifteen feet, it enters a large trough, where the work horses and cows always slake their thirst in summer. The water at no time is more than four inches deep. It is needless to say that in the warmest weather in summer they have cool milk and good butter.—*Cor. Cin. Enquirer.*

Rules for Milking.—The following rules are issued from a New York cheese factory for the use of its patrons, and are worthy of a wider dissemination:

1. Milch cows should have free access, at all times, to good running water.

2. They should never be heated, by being run, stoned or dogged.

3. The utmost cleanliness should be observen in milking, and by no means wet the hands in the milk while milking.

4. No can of milk should stand where it will absorb the barnyard or stable odor, or any other scent.

5. The milk should be strained and well aired immediately after having been drawn from the cows.

6. Some arrangement for effectually cooling is at all times very desirable, and when the milk is kept at home over night, is indispensable.

7. Scalding all vessels used about milk at least once a day with boiling water, and rinsing with cold water at night, is essential.

Cheese Poisoning.—The Lewiston (Ill.) *Union* reports the poisoning of ten individuals, residents of Ipava, by cheese. None of them died, but three or four were saved with difficulty. The physicians, so the *Union* says, pronounced the misterious attacks "the milk disease," it being supposed that the cows from whose milk the cheese was made, were afflicted with that malady.

[One prime cause of milk disease is the stagnant water that cows are often compelled to drink. In no one thing should dairymen be more particular than in providing an abundance of pure, clean, fresh water for their cows to drink. Stagnant water contains the germs of disease, and many malignant fevers and deaths, particularly of children, have been traced to the drinking of stagnant water, or water containing poisonous germs, by milch cows.]

"Be Kind to Your Cow."—A farmer living just out of Vicksburg was reading in an agricultural paper, the other day, an article headed "Be Kind to Your cow." He went out to milk with a heart full of kindness, and as he sat down he whispered: "So, boss—stand around—good creature—hist a little—there, you intelligent and kind-hearted old bossy." About two minutes after that his wife heard him whooping and yelling, and as she ran to the door he called out: "Bring me the ax, Maria, and the spade, and

that big club there, and the butcher-knife and that shot-gun; for I'll be darned if this old hellion shall ever live to kick me in the jaws agin!"—*Vicksburg Herald.*

Porcine.

How to Breed Pigs.

AGE OF PARENTS.

OTHER things being equal, those obtained from parents two to five years old are generally the largest and most vigorous and from such I prefer to select for breeding.

TIME OF BIRTH.

If the climate where bred will safely admit of it, pigs ought to be dropped as early as March or April. By coming thus early, those destined for fattening, if continuously fed well, will be large enough for slaughter the following December or January, which is usually the best time for marketing. If born much later, it may be necessary to winter them over for another year, which lessens the profits of rearing considerably. Those reserved for kee ing up the stock, coming thus early, will get so good a growth at one year as to breed then, advantageously.

FEEDING.

Do this for the first few weeks after weaning, five or six times per day. This keeps them from an empty stomach or overgorging, both alike pernicious. See that they eat up their food each time before being again fed. After attaining three months age, they need not be fed oftener than three times a day, but this should be regularly done morning, noon and night.

KINDS OF FOOD.

The best food I have found for pigs for a few weeks after weaning, is as much cow's milk or whey as they will drink. Into this stir more or less, as required, of finely ground provender slightly salted, composed of six parts of oats, two of corn and one of flax seed. If the latter is not at hand, substitute oil or cotton seed meal. If milk or whey are not to had, use pure, fresh water. If all could be cooked so much the better.

When more convenient or economical, other food may be substituted for the above, such as pea, bran or barley meal, and unbolted wheat, rye or buckwheat flour. Shorts and bran I have found are apt to scour them at this age, especially if uncooked. The same remark will apply to vegetables, apples and other fruit, which if fed at all, should be first steamed or boiled, and then mixed with meal. Brewers' grains and malt combs are recommended, but never having tried them for very young pigs, I cannot speak of their suitableness from my own experience. They are good for older animals.

Other kinds of food assist in producing a rapid growth of the pig, as offal from hotel tables, fisheries, slaughter-houses, etc., but as few can avail themselves of these, I speak more particularly of such as is produced on the farm. Being an omnivorous animal, it does not matter so much as to the kind of food given, except when put up for fattening—then it must be grain or meal of some sort entirely—provided it keeps the pig in a healthy, thriving condition. Care must be had during growth to never stuff nor scrimp, both being alike injurious.

TRETMENT OF PIGS DESIGNED FOR BREEDING.

In warm weather, let them run in a grass pasture, if to be had, with pure running water and plenty of shade. In cold or stormy weather, provide yards with a dry soil and southern exposure, with comfortable pens or sheds, well littered, under which they can retire at will. Cold night air is pernicious to young pigs, and is liable to give them swollen throats, which sometimes proves fatal. Those of nearly the same age should be kept together, and not so many as to endanger any being overlaid and smothered. When kept in pens or yards, supply them with chunks of decayed wood, charcoal, etc.

PURGING OR SCOURING.

Young pigs are apt to scour when fed on too loose food. The best remedy I found for this, was to shut them up in a covered pen, with a plank floor, and feed entirely with well dried oats or corn. Some times I gave, in addition, a little boiled flax seed or oil meal mixed with their drink.

TREATMENT OF PIGS SELECTED FOR FATTENING.

Careful experiments have proved that time is economized and that pork can be be most cheaply produced, by pushing pigs forward as rapidly as possible, from the time of their birth to that of their slaughter, giving them regularly, at least thrice per day, all the most suitable food for this purpose which they will eat up clean and digest. The last three weeks or so, finish off with Indian meal pudding, or whole corn, with pure, fresh water to drink. Old corn, or well ripened and dry of the season's growth, is best. This makes the sweetest and most solid pork of anything I have tried. Some contend that roots and pumpkins have so great a proportion of water in them, that if fed with the whole corn or meal, they tend to an increased appetite, keep the bowels in better order, and lessen the quantity of water a fattening animal would otherwise drink. They add also, that this combined feed lessens the cost of fattening, and makes as sweet and solid meat as corn alone. I cannot vouch for this method, never having followed it; but if I did, I should use the sugar beet in preference to other roots, and the winter squash in preference to pumpkins for I think they are best fitted for this purpose.—*From Allen's Price Essay.*

The Horse.

BEST BREED OF HORSES.

THERE are many and diverse opinions as to what sort of horses are most profitable to raise. The leading breeds on this Coast are fast horses, such as sporting men like. Probably the horse-racing element at our agricultural fairs, which has controlled and overshadowed everything else, has had a good deal of influence over breeders. It requires fine bone and muscle and toughness of cords and nerves to excel in speed, and it is agreed that the "wind and bottom" cultivated in these horses are just the qualities most valued in horses for all purposes.

But there is certainly something more needed than most fast horses possess, even admitting that these valuable points of the fast horse are essential. A profitable horse for all purposes must have size and weight. These are very essential when it comes to doing any kind of teaming or hauling. While he should not be so heavy as to be awkward and cumbersome upon the road, he does need enough weight and strength to easily move along with a loaded wagon over a good road. Fast horses are too nervous for general usefulness; too high-strung, impatient, impulsive, unreliable and untrustworthy. The horse for all work must be so well balanced as to be tractable, gentle, quiet and obedient under all circumstances; not inclined to jerk things and fret under restraint and a load. There is altogether too much of the fast horse mixed with the blood of our common horses in California. We have too many cheap and useless horses—horses that are neither fit for the farm, the road, nor the turf. They can be found in great plenty; are generally held at figures that few care to pay on account of their "good blood;" are kept more for ornament than use year after year, because nobody wants to buy them. No wonder that many farmers declare that there is more expense and less profit in raising horses than any other thing on the farm.

Now we know of but one remedy, and that is to discard the race horse and breed from the best breeds of work stock. Never mind what the jockeys say. Their interest all lies in one direction, and their wisdom is too one-sided. Look around you and pick out the teams that are, on an average, worth the most money, and are the most in demand, and are most needed. You will find them horses weighing from 1,100 to 1,500. Say the standard will be 1,150 to 1,250 pounds each. Such horses will sell readily every fall for $400 to $600 per span, for farm work, when lighter horses will be left on your hands to "eat their heads off."

The sensible farmer should study his own interests in this matter as in every other, and not breed to suit the fancy of jockeys and stud-horse owners.

Experience has proved that valuable colts can often be got from common light mares by breeding to the heavy work stock, either English or Scotch breeds. The same mare bred to fast stock will bring cheap colts of little use or value for anything. The farmers in every township should club together and get a good heavy stud, and try to raise up a stock of horses that *will pay* in money and in useful returns—horses that can work on the farm, haul your produce to market, or take you to town in good shape before a light wagon. Let the fast men breed their fast stock. Choose the best.

INTRODUCTION OF THOROUGHBREDS IN CALIFORNIA.—A writer in San Mateo, California, to the *National Live Stock Journal*, states the following:

In the early days, and for about five years after the American possession of this country, the horses consisted of the Spanish mustang, reinforced by the few American horses and mares brought across the plains by immigrants; and these were a few of all sorts, among them some well-bred and even thoroughbred mares from Kentucky and the West. I have certainly seen many that looked it, although the pedigrees given often sounded rather "miscellaneous." Till 1853 or 1854, nobody thought of improving the breed of horses, and the first person I heard of attempting to do so was William Hood, of Los Guilacos, Sonoma county, then, as now, a rich land proprietor, at whose place I happened to be in January, 1854, when he showed me a two-year-old colt which he had purchased in Yorkshire, and which had just arrived here. This was the thoroughbred imported Lawyer, of whom more anon. About this time, or soon after, appeared upon the scene the brothers Williamson, bringing with them the well-known and highly-esteemed Belmont (grandsire of Thad Stevens), and several thoroughbred mares, which at once established these gentlemen as the founders of thoroughbred-horse breeding in California. After another interval of time, Mr Combs brought across Billy Cheatham and Ashland, thoroughbred stallions; but I rather think he had not any thoroughbred mares, calculating, like Mr. Hood, to breed from such well-bred mares as were here. There were also several trotting stallions of more or less repute, among which I may mention old General Taylor and Black Hawk David Hill, and a horse called Rattler, and a big English horse known as Peacock, who was brought from Sidney, Australia, and worked in San Francisco as a dray horse, and afterwards made a couple of seasons, and got many very excellent generally-useful horses.

NAILING ON THE SHOE.—No shoe should ever be nailed to the foot until it has been ascertained that the pressure of the hands is sufficient to keep it steadily in its place, and preclude any appearance of daylight between it and the foot. A motion prevails in many places that the shoe gives the particular form to the foot. This is a mistake, for no foot can possibly be affected by any form of the shoe it may stand upon. It is the situation of the nails which alters the form of the foot, by preventing its expansion, and such prevention of expansion is the cause of much of the lameness affecting the foot. In putting on the shoe the nails should be driven with a gentle hand, and they ought not, by any means, to be clinched very tight. Hard driving and tight clinching will bend the hoof at the place where the clinches are turned, inwards and downwards towards the shoe, in such a manner as to injure the tender parts contained within the cavity of the foot. Besides, it is not necessary for a man to forget he is working with the foot of a living animal. The shoe will remain on a sufficient length of time with gentle driving and clinching, provided it is properly fitted to the foot. If it has a thoroughly even bearing there will be little stress on the nails. Coarse nails often split the hoof, and thus keep it continually broken. A fine nail will answer all the purposes required, if it is made of the right material. The clinches should not be rasped away too fine, nor should the covering of the hoof be allowed to be rasped away (as nearly every smith seems to delight in doing); it destroys the covering provided by nature as a protection against the too rapid evaporation of the moisture of the hoof, and causes the horn to become too dry and brittle.

In connection with the application of the shoe, we know of no worse fashion than the one which the smith has of forcibly taking hold with the thong and hammering the shoe to the one side or the other, after three or four nails have been driven, for the purpose of putting it straight on the foot. This is a speedy method of making up for his want of accuracy in placing it at first; but it should never be practiced. It strains all the nails which have already been driven, and is calculated to do serious damage to the foot.

THE agriculturist is taught to look upon this lovely earth of ours as the beautiful landscape of God's creation which is imbued with the powers of life, to breathe and feed, and to yield its elements and products to the nursing and delicate operations of his hands. While he follows the plow he perceives its use; he sees in it how the educated mind of man has infused mechanical science into

its structure. He marks well the work it has to do, and how well it is adapted to the work. He now contemplates the seeds he commits to the earth, and does not believe that it is the work of chance that they grow. He sees, too, that they are inspired with the germinating powers of life and light. He perceives that they are distinguished by the qualities of good and bad, and knows that perfect analogy which characterizes life in its inception, growth in progress, the product of their results, and the final death of all vegetatable as well as animal creation. But, above all, and more than all, he has learned to know himself; that he is a part of this special work of God's hands, placed here to direct and govern all these things.

Women.

Love.

When we love we live.—[Congreve.

In love we are all fools alike.—[Gay.

Love me little, love me long.—[Marlow.

Where love dwells is paradise.—[Richter.

Love is the virtue of woman.—[Dudevant.

Words of love are works of love.—[Balzac.

She that is loved is safe.—[Jeremy Taylor.

Love is an egotism of two.—[A. de la Salle.

True love is grounded on esteem.—[Buckingham.

Love seldom haunts the breast where learning lies.—[Pope.

If sin is good, truth is better, and love best of all.—[Thackery.

Hate makes us vehement partisans, but love still more so.—[Goethe.

In love the deceit generally outstrips the distrust.—[Rochefoucauld.

I could not love thee, dear, so much, loved I not honor more.—[Lovelace.

Love is precisely to the moral nature what the sun is to the earth.—[Balzac.

Love one time layeth burdens: another time giveth wings.—[Sir P. Sidney.

Gold does not satisfy love; it must be paid in its own coin.—[Madame Delazy.

How shall I do to love? Believe. How shall do to believe? Love.—[Leighton.

Love as if you should hereafter hate, and hate as if you should hereafter love.—[Chilo.

Love is the fountain from which flow the concomitant graces of true nobility.—[Page.

Cleopatra, Queen of Beauty.

ONE of the most remarkable women in all the ages was Cleopatra, queen of Egypt. Brought up in the luxurious court of her royal father, Ptolemy Auletes; taught in all the wisdom of the Egyptians, and combining in her person a wonderful beauty and grace of manner, she was enabled by the skilful use of all her powers to bring even Imperial Rome to her feet. Kings and Emperors stood spell-bound before her matchless charms, and forsaking home and country willingly became her slaves. During all her eventful life she was no less queen of hearts than queen of Egypt, and the mark she made on the world's history was so great that it has lived for nineteen hundred years, and doubtless will to the end of time.

Historians describe her as small in stature and perfect in form. Her voice possessed a silvery sweetness, and her face an indescribable beauty which captivated all who saw it. She was also a woman of great firmness of character, much personal courage and wonderful executive ability. At the same time she had traits, which, when called out, made her selfish, designing and cruel.

Her first important conquest in hearts was none other than the great Julius Cæsar. He was so infatuated that he deserted his wife and family, neglected his empire, and gave himself up wholly to her. He lost his throne and life in consequence, and a bloody civil war followed which raised to prominence the great warrior, orator and statesman, Mark Antony. Desiring to make a public example of her for leading to destruction the Imperial Cæsar, he sent a messenger to Egypt and summoned her to meet him at Rome.

Cleopatra was now twenty-eight years old and in the hight of her charms. She at once set about making preparations for the voyage. Egypt was the home of luxury and splendor, and all its resources were employed in fitting out the royal train. Gold and silver, rich services of plate, ornaments of precious stones and gold were stored in her ships, and the fleet sped away over the blue waters of the Mediterranean, the most splendid sight the world ever saw. When it reached the mouth of the river Cydnus it stopped, and here the royal barge, adorned with carvings and decorations and glittering with gold, was launched, on which the queen now embarked. The sails were of purple, and the oars inlaid and tipped with silver. Upon the deck, under a stately canopy made of cloth of gold, Cleopatra reclined, gorgeously attired. Around her were a company of beautiful boys and girls representing cupids, nymphs and graces, who fanned her with their wings. Singing birds and flowers added to the attractiveness of the scene, while bands of musicians played soft airs, and kept time to the stroke of the silver oars with the most ravishing music. Thus, preceding her fleet, she sailed up the stream to meet and to conquer the conqueror of Rome.

Antony was then at Tarsus, but the whole city deserted him and hastened to the river bank to behold the remarkable pageant. She landed, spread her tents, prepared a sumptuous banquet and with womanly tact sent an invitation to the sturdy Roman to be her guest.

Moved by curiosity, he accepted and went, and from that hour became her abject slave. Like Cæsar, he left his throne and family to cast his fortune with hers. Whole days and nights of revelry were spent with her on the banks of the Cydnus, until he became so enamored that he left Rome and followed her to Alexandria in Egypt, where for years he resided. Here the wily queen devoted herself to him incessantly, filling up every moment of his time with some new form of pleasure, in order that he might not think of his absent wife and children, and of his empire on the verge of ruin.

His continued absence from Rome led to war. A rival, Octavius, appeared. The great naval battle of Actium was fought and Antony was defeated. He fled to Alexandria where he was pursued by his enemy. The city was besieged and finally taken, and amid the horrors of the scene, word was brought to him that Cleopatra had taken her life. This was the crowning calamity, and he immediately made preparations for his own death. When ready, he endeavored to have his attendant, Eros, kill him with his sword, but he refused. He then took it from the servant's hands, plunged it into his body, and staggering to a bed that was near, fell over it in a swoon. Recovering shortly after, he was told that Cleopatra was still living and desired to see him. Antony begged to be carried to her that he might die in her presence. She was in the palace, and the dying Roman was borne through the terror-stricken city and raised by means of ropes to the chamber of the queen. He was carried to a couch and laid upon it, while Cleopatra wrung her hands and tore her hair in the greatest anguish. She clung to her dying lover and bathed his blood-stained face with her tears, uttering the most piteous exclamations of grief. But groans and tears could not avail, and he died in her arms.

She now gave herself up to the wildest despair. Octavius, desiring to publicly exhibit her in his triumphal train at Rome, endeavored to so guard her that she could not take her life, but she managed to have brought to her in a basket of figs a poisonous insect known as the asp, and applying this to her arm, died, defying her conqueror.

Thus ended the career of this matchless beauty, whose wonderful life and tragic death have formed a subject upon which poets, painters and sculptors have exhausted their efforts during all the ages since. Had she lived in our day, her life and influence might have blessed instead of blighting the world. Says Abbott, the historian of her: "The events of her history, the peculiar character of her adventures, her sufferings and her sins, were determined by the circumstances by which she was surrounded, and the influences which were brought to bear upon her in the soft and voluptuous clime where the scenes of her early life were laid.

WHETHER admitting women to "membership and position in the Grange," is all that is necessary to inculcate "a proper appreciation of their abilities and sphere" depends somewhat on what is a proper appreciation. For our own part, we do not think that permitting one's wife to do all the drudgery of the house, to have no leisure time for reading, tending flowers and visiting, shows a proper appreciation of those matters. Nor do we think that sending the sons to college and giving the daughters only such education as is to be had at the district schools, gives evidence of it. We are inclined to doubt whether a strong man who allows his little wife to carry the baby at the county fair—we have neither the space nor the inclination for any discussion of the much mooted question whether babies should ever be taken to fairs—really possess it. Finally, we sometimes think that the men who insist on paying a competent female teacher a smaller salary than they pay an incompetent male teacher are not imbued with it. Holding these particular views, it may not seem surprising that we should think something more than admission to the Grange necessary to inculcate a proper appreciation of woman's abilities and sphere.—*Grange Bulletin.*

WOMAN'S influence depends largely upon her power of charming. A frowsy woman may possibly be morally very excellent, but her influence will be far less than that of a fascinating, sinful sister. It is time that women understood that beauty, grace, culture and every feminine attraction may be made powerful for good. The representative French woman cultivates and preserves her charms to pander to a personal vanity that longs for continued admiration and adorers. The American woman of the *demi monde* pursues the same course regarding outward charms. But it is left to a few noble, appreciative, lovely women to grow old beautifully and gracefully; to make for themselves places in the hearts and esteem of men and entrench themselves in the stronghold of their purest love so firmly that no rival can dethrone them. Their sons are their ardent lovers. Aged men retain for them all the admiration, respect and gallantry of their youth; and the young men reverence them and hope their own young loves may live to be as lovely as they.

"Hue to the line, let the dispose," etc.

Hygienic.

Toothache.

Gracious! Godfrey! how it pains me!
Lordy! don't that old tooth jump!
Seems as though ten thousand devils
Pried with crowbars round its stump.

Whew! can't some one give me something
Just to stop this blasted pain—
Hot-drops, laudanum, cloves or hop-bag?
Quick! or I shall be insane!

Stop that 'tarnal baby's squalling!
Jethrew! don't my tooth ache sweet!
Darn that cat! I'd like to kill it!
Always under some one's feet.

Jove! I'd like to fight with some one,
Just to get my jaw stove in—
Fire! murder! Godfrey! Gunther!
Oh! it's aching now like sin!

Howling, am I? Well, I know it!
And I guess that you'd howl, too,
If you had a blasted toothache—
Same as this one—troubling you!

Curse, I know it don't relieve me;
But I'm crazy with the pain!
Ain't there anything to ease it?
Let me try the hops again.

There, now, gently—place them easy!
Phew! they're hot! Just let 'em cool!
W-ll, put 'em on. You're bound to burn me!
There, you've done it! Darn a fool!

CARE OF THE TEETH---MODERN DENTISRY.

BY A. O. HOOKER.

IMPORTANCE OF FILLING.

IT has been estimated that twenty millions of teeth are lost from the mouths of our population of the United States annually, all or nearly all of which might be preserved from pain and decay until old age, by timely and judicious filling with gold and other approved materials. The old and oft-repeated adage, "an ounce of prevention is better than a pound of cure," is nowhere more applicable than to dentistry. If teeth were properly filled in the early stages of decay, the operation would be attended with much less pain and fatigue and the dire dread which many people now have of the dental chair would not be known. Procrastination is the silent thief that gnaws away at these valuable organs until they are past all remedy, and they are offered a sacrifice upon the altar of common neglect, to be replaced by an artificial substitute which at best is but a poor apology for the natural teeth.

Within the past few years there have been produced a multitude of new and useful improvements, all tending to quicken the process and mitigate the pain of dental operations, not the least of which is the

DENTAL ENGINE.

This is used for a great variety of work, such as filing polishing, separating and cleaning the teeth, but more especially for preparing cavities for the reception of gold and for finishing the same after the tooth is filled. It does this in a very efficient and beautiful manner. A few moments' of experience with the engine is sufficient to convince almost any one that it is far superior to any and all instruments previously used for such purposes.

Another very valuable acquisition to the long line of improvements, which might be mentioned as comparatively recent, is the

RUBBER DAM.

This takes the place of a mouth full of napkins, muslin, bibulous paper, sponges and a variety of other articles for keeping a tooth free from moist-

ure while filling, at the same time it gives the patient perfect ease and freedom.

But notwithstanding the many improvements and the efforts made to lessen the severity of the dental chair, there are a few who approach it with a faltering step and a feeling akin to that of a martyr of olden times, when live nerves were plucked from their bony cells with ruthless hand. Unfortunately those few approach the chair so seldom that their teeth are irretrievably lost. This brings us to the subject of

ARTIFICIAL TEETH,

and while this branch of the profession has been making rapid strides, there seems to be one feature which has been partially overlooked. This is in the failure to restore the natural expression of the face by the replacement of lost teeth. The great law of adaptation in reference to which Nature plans all her work, is nowhere more manifest than in her production of human teeth—always beautiful, unless deformed. And when it becomes necessary, through neglect or other causes, to have these natural organs remove, the inventive skill of man comes into requisition to furnish a substitute which may not only be useful, but shall recognize this unerring law of harmony. So perfectly has this difficult task been performed by the ingenious and untiring manufacturers of artificial teeth, that the dentist has no excuse, through lack of study or perception, to cause such glaring deformities as are often perpetrated. It is evident that the majority of those engaged in this branch of the profession have given more time and study to the best methods of securing comfort, usefulness and durability to artificial dentures than to the equally important question of fitness and harmony with the general physical characteristics of the patient. To this account may be justly charged the unsightly appearance of mouths whose lost teeth have been replaced in disregard of this universal law. It matters not how well adapted for speech and mastication an artificial denture may be, if it bear not the relation demanded by age, temperament, peculiar mould of face, etc., it cannot fail to give that artificial appearance which attracts the attention of every beholder. And yet how often of this sad lack of taste staring at us from mouths where every sense of aesthetic beauty and harmony is violated—teeth of a Russian in the mouth of a Frenchman, those of a New Englander given to a South Carolinian, or those of a Canadian to a Cuban; the lips of age disclosing the teeth of youth, and no distinction made between a male and a female denture.

San Jose, August, 1876.

KEEP FOOD IN A CLEAN PLACE.

Ed. Agriculturist: I inclose an extract from No. 1675 of Littell's *Living Age*, showing the absorptive power of milk, which fact may be new to many of your readers, and I think that this curious power in milk may be the unsuspected source of ill health in many families who are compelled to keep their daily supply of milk in the same room with other articles of food.

J. P. Rowe.

Absorptive Power of Milk.—Attention has been called in the daily papers to a practice prevalent in some parts of the country, which appear to illustrate the power possessed by milk of absorbing atmospheric impurities. It is that of placing a saucer of new milk in a larder, to preserve meat or game from taint. It is said that not only does it answer that purpose, but that the milk after a few hours becomes so bad that no animal will touch it.

[Housekeepers cannot be too cautious how they expose food of any kind to emenations of decaying substances. Dry bread will absorb decaying odors and soon become unfit to be taken into the human stomach, if shut up in the same room or cupboard with bad vegetables, meat or other things. Water will absorb infectious air if left in a sick room, or exposed to putridity. There is great apparent ignorance generally upon this subject, and many persons and families are made sick from eating and drinking substances that have been rendered poisonous by absorbing the germs of disease from bad air.—Ed.]

LESSONS TAUGHT BY SUFFERING

Ed. Agriculturist: The bed of sickness often teaches many valuable lessons. Suffering untold agony with an affection of the head, resulting in partial deafness, I learned a lesson never to be forgotten. The thoughts and suspicions, without any foundation, which leaped through my brain were unjust and unnecessary. I have since tried to look with charity and real pity on those with faults, since nothing so much as ill health or abnormal conditions can cause inconsistencies of conduct and petulence.

Be tender towards a fretful child. The cause may be traced to indigestion, unequal circulation or some discomfort of the body. Keep before you the fact that two-thirds of humanity are sufferers physically, and you may not wonder at the impossibility of perfection on earth. Of all the virtues we poor mortals need most to cultivate, *charity stands first.*

Arundal.

How to Rescue a Drowning Person. A child may be easily managed by an expert swimmer; but if the drowning person is strong and powerful, it is often imperatively necessary to keep out of his reach until he is partially exhausted; otherwise he will clutch his rescuer, and both may go down together helpless. Calmness and caution are invaluable in the water. The sufferer will clutch anything extended toward him at first—an oar, branch of a tree, a necktie, or a sleeve of a jacket, and if the other end of the article can be held in the mouth, the rescuer has the use of his arms. But still it is needful to keep out of the reach of the drowning person. Go behind him and push him along, but never attempt to reason with him. If he becomes insensible, a good swimmer can easily bring him to the shore or to a place of safety, and then the proper means of restoration should be immediately used. Impulsive recklessness, even though inspired by the most generous feeling, will not be so likely to save a drowning man as thoughtful caution. It may be well to mention that in case one feels cramp coming on while in the water, it is best not to stop, but to strike out faster than before; a sudden jerk of the limb is often an effectual relief.

To Save the Drowning.—The Massachusetts Humane Society has published very brief and intelligible directions for saving the lives of persons rescued from the water after they have become insensible. They are as follows:

1. Lose no time. Carry out these directions on the spot.

2. Remove the froth and mucus from the mouth and nostrils.

3. Hold the body, for a few seconds only, with the head hanging down, so that the water may run out of the lungs and windpipe.

4. Loosen all tight articles of clothing about the neck and chest.

5. See that the tongue is pulled forward if it falls back into the throat. By taking hold of it with a handkerchief it will not slip.

6. If the breathing has ceased, or nearly so, it must be stimulated by pressure of the chest with the hands, in imitation of the natural breathing; forcibly expelling the air from the lunge, and allowing it to re-enter and expand them by the elasticity of the ribs. Remember that this is the most important step of all.

To do it readily lay the person on his back, with a cushion, pillow or some firm substance under his shoulders; then press with the flat of the hands over the lower part of the breast bone and the upper part of the abdomen, keeping up a regular repetition and relaxation of pressure twenty or thirty times a minute. A pressure of thirty pounds may be applied with safety to a grown person.

7. Rub the limbs with the hands or with dry cloths constantly, to aid the circulation and keep the body warm.

8. As soon as the person can swallow, give a tablespoonful of spirits in hot water, or some warm coffee or tea.

9. Work deliberately. Do not give up too quickly. Success has often rewarded the efforts of hours.

Eating Fruit Skins.—The marjority of country people I have observed eating fruit, eat the skin of it also. Their children eat it in the same manner, and seem never to have been taught that the skin of fruit—be it apple, peach, pear, plum or grape—should never be eaten, especially if uncooked. Fruit skins are so difficult of digestion that there is probably not more than one stomach in a hundred capable of performing the difficult task. The skins are to fruit what shells are to nuts, hides to animals, and husks to grain. To oblige or allow a child to eat his apple or pear unpeeled, is unkind and wrong, for it is no question of dointiness, but of health.—*Cor. Rural New Yorker.*

Remedy for Warts.—Warts are very troublesome and disfiguring. The following is a perfect cure, even of the largest, without leaving any scar. It is a Frenchman's prescription, and has been tested by the writer: Take a small piece of raw beef, steep it all night in vinegar, cut as much from it as will cover the wart, and tie it on it; if the excrescence is on the forehead, fasten it on with strips of sticking-plaster. It may be removed in the day and put on every night. In one fortnight the wart will die and peel off. The same prescription will cure corns.

A Child's Bed.—A child's bed should slope a little from the head to the foot, so that the head may be a little higher than the feet—but never bend the neck to get the head on a pillow. This makes the child round-shouldered, cramps the veins and arteries, and interferes with the free circulation of the blood. Even when the child is several years old the pillow should be thin, and made of hair, not feathers.

Earache.—There is scarcely any ache to which children are subject, so bad to bear and difficult to cure, as the earache. But there is a remedy never known to fail. Take a bit of cotton batting, put upon it a pinch of black pepper, gather it up and tie it, dip in sweet oil, and insert into the ear. Put a flannel bandage over the head to keep it warm. It will give immediate relief.

Preservation of the Teeth.—Bowditch, in examining the teeth of forty persons of different kinds of life, found in almost all vegetable and animal parasites. The parasites were numerous in proportion to the neglect of cleanliness. The means ordinarily employed to clean the teeth had no effect on the parasites, whilse, soapy water appeared to destroy them. If this be a true version of the cause of caries—the action of acids, supplemented by the action of fungi—then it follows that the great means of preserving the teeth is to preserve the most scrupulous cleanliness of the mouth and teeth, and to give to the rinsing liquids a slightly alkaline character, which is done by the admixture of a little soap. This is not so pleasant a dentrifice as some, but is effective and scientific. Acids not only dissolve the salts of the teeth, but favor the increase of the fungi of the mouth. No increase of fungi and no action the dental tissue occur in solution of soap. The good effects of stopping the decay of the teeth, in the light of these experiments, are intelligible. The penetration of acids and fungi is prevented.

Care of the Hair.—Brushing the hair every day, the more the better, is recommended to those who crave a luxuriant and handsome growth. If it is very oily, wash it occasionally with a lotion made by mixing one drachm of soda with half a pint of water and adding the well-beaten yolks of two eggs. A teaspoonful of ammonia in a quart of rain water makes a good lotion for the hair; wash it in this frequently, dry it well, and brush it a long time; if the ammonia is too strong it will bleach the hair and injure it. The use of a lead comb will darken flaxen and red hair, and it is said on good authority, will water in which potatoes have been boiled. Hair oils and pomades are an abomination, and are, as they should be, entirely out of fashion.

To Avoid Sleeplessness.—If you wish to sleep well, eat sparingly of early suppers. Avoid all arguments or contested subjects near night as these are likely to have a bad effect on one who is troubled with sleeplessness at night. Avoid having too much company. Many persons become so excited with the meeting of friends that sleep departs for a time. There is probably nothing better after cultivating a tranquil mind, than exercise in the open air. By observing these simple rules, sleeplessness, in the majority of instances, may be wholly cured.

To Remove Freckles.—A simple remedy for removing freckles is a pint of sour milk and a small quanedity of horse-radish. Let the mixture stand over night, and use it as a wash three times a day until the freckles disappear.

The Earliest Bank of History.

PAPER VS. COIN.

In 1171, when the gallant republic of Venice singly withstood the shock of the Asiatic hordes that threatened to inundate Europe, Duke Vitale Michell II. called on the wealthy citizens to contribute to a load of 2,000,000 ducats for the defense of the state, the sums so loaned to be entered to the credit of the contributors on the books of the republic. These credits being divisible and transfurable, grew into favor as a currency, performing all the functions of money, and rose to a high premium above gold and silver coin. Such was the origin of the earliest bank of history. In 1423, a law fixed the *agio*, or premium, at 20 per cent., and directed all payments not otherwise provided for to be paid at the

bank of Venice, which at the same time it discontinued the 4 per cent. interest that had hitherto been promptly paid on the credits. This 20 per cent *agio*, added to the coin ducat of Venice, constituted a new unit of value, represented by no coin, yet maintaining its ideal existence as the ducat of the bank of Venice, and rose to an additional *agio*—termed a *sur-agio*—of 20@30 per cent., and continued the favorite currency of the Adriatic for nearly 400 years, until the remorseless march of Napoleonic despotism, in 1797, crushed the republic. A worthless booty was found in the bank for it had no coin or deposit, but only a faithful record of the loans that, more than 600 years before, the citizens of Venice had made to preserve the life of the republic. France repaid the citizens, but the bank and the republic were no more. There was the money of a republic having no foundation but credit on the books of a department of its treasury, with no coin in its vaults, and not bound to make that credit good in later times by any payment of interest or any redemption whatever, which yet stood for hundreds of years at a high premium over gold and silver coins. Plain and open in all its progress, there was no peculation or steal in any of its processes.—*N. Y. Commercial Journal.*

Household Reading.

DOTTINGS AND JOTTINGS.

BY ISAAC KINLEY.

HONESTY, every one says, is the best policy. As it is the best also in morals, where does the rogue find his argument? Man is said to be a rational being; but by what logic can there be deduced, for crime, a plausible pretext? The criminal may indeed evade human laws; but the laws of God are within, and their penalties are inevitable—torturing even in this life, sometimes to confession, sometimes to suicide, and always to misery.

Ignorant and short-sighted policy is crime. Its consequences should frighten even villains to virtue.

"Were I not Alexander, I would be Diogenes," was said by that human butcher yclept in history Alexander the Great.

There was more wisdom in this saying than is often found in the acts of "Macedonia's madman." Alexander had conquered the world to his desires, and Diogenes had conquered his desires themselves. The hero commanded the resources of the world and had not enough; the cynic lived in his tub and was content. The rich wines and purple robes of Babylon no more satisfied the wants of the one than the water of the brook and his sackcloth those of the other. Extremes met, and the humbler man was the greater conqueror.

Could we look into the heart and see the *motives* that have inspired the act—could we see the temptations that have bewildered, and the struggles only just not strong enough to conquer, we would often excuse, and sometimes approve, where we now condemn, and sometimes condemn where we now approve and applaud.

The moral of an act lies in the *intent*. Blessings are for him who earnestly strives to do the right.

Blinded though he be by a thousand prejudices, the striving will ultimately rend the vail, and he will be enabled to see. It was because the persecutor honestly believed that he was doing the will of God, that the heavenly vision came, and Saul of Tarsus became Paul the apostle of the Gentiles.

A man stood straight up, looked me full in the face, and deliberately told that which he knew to be false. He knew he had said that which was not true. He knew that I knew he had told what was not true. There was a quiver in his eye which he could not quite conceal, a quailing before my strong contempt which he could not quite avoid. He put a hundred or so dollars in his pocket by the falsehood, and took a like amount out of mine. And yet he, and not I, was the loser—I, and not he, was the gainer by the transaction.

What did he lose, do you ask? Possibly money. For I could never again trust him, when only his honor was in pledge, to the amount of a single dime. I could not advise a friend to trust him, even though his necessities might be ever so great. I could never again speak of him as an honest or honorable man, or as one with whom it would be safe to be associated in any business transaction. So the lie which earned him a few paltry dollars at its utterance may cost him many hundreds before he has done with its consequences.

It cost him in reputation. One person, at least, knows him to be a man without honor or integrity. If, as a warning to friends, I may have told of the transaction to others, the news of his falsehood may have spread, and many besides myself may have learned of his dishonor. And if a jury of twelve men may, at any time, have hesitated to accept his statements on oath, or found his honor light as weighed in the scale against that of another, possibly it may have been that the lie he told to me came up to curse him.

There is no concealing a falsehood. Even if the person to whom it has been told intends, out of mercy, to withhold it from the world, he cannot quite carry out his charitable intentions, for he must himself be truthful; and, though he may never turn public accuser, he can never again speak of the author of the falsehood as being an honorable man, or one whom under any circumstances it will be safe to trust. And if he should happen to be in such relations to the man as to know him well, a failure to praise will be accepted as an accusation, and others will learn to hesitate.

But the liar, himself, is the greatest gossip of his own lie. Having told it, he feels that it must be supported; and the first necessitates the telling of ten others not less meretricious. Neither do these escape detection, and thus the witnesses of his bad honor are multiplied.

But, unfortunately, the new lies need bracing quite as much; and thus the first falsehood becomes the father of an endless progeny. Soon his very countenance loses the look of integrity and proclaims him unmistakably to all. His reputation is in the air, and, in language which cannot be misunderstood, every one hears him proclaimed a liar.

He loses in moral growth; and this, valuable as reputation or property may be, is the greatest of all losses. Integrity is a treasure in itself, and a man with God on his side may face the world. Its value is not measured by the money it puts into the pocket, the reputation it brings, or the offices of trust or profit with which it honors one. It is itself the gold compared with which these are but common dirt.

The liar has lost his integrity, lost his reputation, lost his self-respect, lost the approval of heaven, and dwarfed his own soul. Weighed against these, what are the few paltry dollars which his falsehood put into his pocket?

And have I gained nothing? Some of my gains are negative one. I did not lose my integrity; I did not cover my face all over with the blushes of shame, and lose the power to look an honest man in the face. I did not cultivate a feeling among my neighbors that I am a man of doubtful integrity, and one whose word under oath is unworthy of belief.

But my greatest gain, that compared with which all else is as the dust on the shoe-sole, is a positive quantity. I have gained these and other reflections tending to reinfore my own integrity and to contribute to my own moral growth, a single grain of which outweighs whole mountains of money.

Again I ask, was he or I the loser—he or I the gainer by the transaction?

He who thinks meanly of others without a cause is likely himself to be mean. His opinions are the suggestions of his own baseness. His nature is a colored glass throwing its own hues on everthing he looks upon. It is a positive pleasure to have faith in the honor of others, and it is better to be deceived a thousand times than never to trust.

Nevertheless, he is not wise who confides indiscriminately. If there were but one tiger in the forest, the prudent man would carry his rifle. If but one man in a thousand be a rogue, it is quite enough to put a lock to the door. Safety is always on the side of prudence, and I should not choose to trust my money or my reputation in the keeping of one of whom I know nothing.

San Jose Institute and Business College, August, 1876.

INFLUENCE.

BY P. F. P.

I have stood on the bank of a quiet lake and admired its calm and unruffled beauty as its waters seemed sleeping on the bosom of mother earth. Then tossing a tiny pebble into it, I watched the circular ripple it caused, until the silvery wavelets, spreading wider and yet wider, have broken on shore.

I have held in my hand a single grain of wheat, and thought, as I looked from the single grain to the full bin, though its size is so small and its weight barely more than nothing, yet it is needed to make up the ton and full bin, which is composed of similar individual weights and sizes.

What a lesson is here to you and me! We, too, have an influence. It may be small, like the weight of the kernel of wheat; yet it is sufficient to exert a power over our associations. Our influence may be so small that we are unconscious of its existence. Nevertheless it is a quality inherent in every one, and, great or small, it exercises a constant and irresistible power over those about us. Silently, perhaps, yet certainly, we are tending to mold those with whom we associate after our own likeness, and they cannot help themselves.

At the same time, we are being acted upon by a similar influence exerted by our surroundings. This exterior power we cannot escape. Gradually it is making indelible impressions upon us.

Now, our influence is being exerted either for good or evil. We are either tending to elevate our fellowmen, to better their state and condition; or we are helping to degrade and drag them down. We are either sowing the seeds of virtue, or disseminating the germs of vice. We are either "co-workers together with God," or we are doing the work of Apollyon! There is no middle ground. We can no more prevent the effect of our own influence upon others than we can escape the power they exert over us.

This is the position, then, we occupy. We may be a blessing to others, or we may prove a mildew to blight and blast! Our associations may be to us a source of everlasting benefit, or we may become so contaminated by vicious surroundings that, instead of the beauty of uprightness and moral virtue and integrity, we shall present a marred, distorted and loathsome picture of shame and disgrace.

Now, I would not be understood as teaching that our individuality is necessarily wholly absorbed by our surroundings. We have power to resist an *entire* conformity to the example before us, but *cannot* escape being *more or less* affected by it, and so powerfully and stealthily does it grow upon us, that we need to use every faculty we possess in the cultivation of better principles, in order to to maintain our own. It is also true we may so exert an ennobling influence over our companions as to lift them up with us. Our chosen companions and resorts are the hidden rock upon which our bark is most in danger of being dashed to pieces. If we are unwillingly thrown among the vicious, we may to a certain extent escape pollution, but we cannot wholly. We are, in a measure, mirrors reflecting the character of our associations.

If this is true, what care ought we to exercise in the choice of our associates! And with what circumspection ought we to walk that our example be not a source of offense to any!

APOLOGIZING.

A most despisable and unworthy thing is that weak and sickly spirit we sometimes see manifested in some persons which is forever begging pardon and apologizing. No matter what is the character of the circumstance, with some the stereotyped phrase is ever ready, "I beg pardon," or "Excuse me." Often these expressions are used unthoughtlessly, but for this they are only less graceful. Too often, however, they are the promptings of a spirit so effeminate that it dare not be right if there is the least opposition. The manhood that ought to exert itself is allowed to cringe and bend till its unsightly dwarfishness is simply despicable, and we turn from it in disgust.

Equally as far from true manhood is that spirit which withholds an apology on proper occasions and under proper circumstances. This is only allied to the bully or the savage; it is never met with in the gentleman. A gentleman of truly noble character finds everywhere only unrest while his conscience reminds him of a wrong that he has not mended, or at least apologized for. We sometimes hear of persons too weak, or too vain, to apologize, but in them true dignity of character has no place. It is not pride of character, but the want of it, that withholds an apology for an insult given or an atonement for an injury done. He who really values his character will hasten to remove even the slightest stain.

Between these extremes lies the true, proper course. An apology for a wrong done is manly; an apology when no cause is given is ridiculous; to withhold an apology for an injury is stupid vanity.

P. F. P.

Read over our list of premiums.

A STRAY GEM FROM CUPID'S COURT.

Mr. Editor: In looking over my papers, the other day, I came across the following specimen of a love-letter, and thinking it would be as pleasing, if not as instructive, as the correspondence of "Angie" and "Inglewood," I concluded to send it to the Agriculturist. The letter is a true verbatim copy of the original, and quite a joke attached to it. It was written to and received by the lady in the year 1862, while dated forward to 1865. And as the writer failed to pay postage, the lady was notified and had to send the requisite stamp.

Annie.

Pine Ilant Abril 32 1865

My Dear seen it is you I thought I wold write to you once more ant to see if you wold write to mee or not I wishet you wold write to mee fore I wold like to hear from you this is three letters I have sent to you ant I havent receved one frome you yet if you wanto git Marrit I wisht you wold Come out hear fore I want a wife verry bat I am left all alone ant I Cant work in the house ant outoors too I want a women ant I must have one ant I shall have one if you cant Come I wisht you wold sent me elysee Ellen or some other nice girl that wants to git marrit to a good husbant as Frank Fox is he is a glibber now if you wanto git marrit now is your thime ant hear is the blase to git marrit fore any boty wants a husban if you Dont wanto git Marrit quite yet I wold like to have you write to mee so that I may Know whare you are for I thing a good Deel of you I wishet you wold sent mee your likeness if you Dont thing of Coming out and I will sent you mine so I will glose ant will write to you as often as you will write to mee yours truly Miss Jerusha Duret Cowlesville Wyoming County New York From Mr Frank Fox Pine Island Goodhue County Minnesota box 50 tell the folks I am rich I have got 120 achers of lant I care fore noboty

ant noboty cares fore mee

UP-COUNTRY LETTERS---NO. 8.

BY RACHEL A. ELY.

Rest! Oh! the magic of its power! The few know its joy only when their over-tasked bodies and brains may freely revel in its calmness, feeling it their right and duty to do so. Few of us can do this. Circumstances enchain and enslave us to such an extent that we even carry our fret and worry into our churches, and often make the day of rest one of labor and fatigue. I felt this as I lay under the cool shade tree on Sabbath last and listened to the quiet voice of my hostess, who makes Sunday a rest-day surely, cooking only a breakfast on that day. Cold meat, bread, butter, cake, milk, fruit and such fare, serves the other meals. The dishes are left for washing till next morning. So, I say, as I lay listening to my friend, who was giving me her idea of what the day of rest should, and was intended to be, and compared it with the way an old sexton, Deacon P., whom I knew, used to "enjoy" his Sunday, which he "allowed" was the hardest day of the week to him, I could but mark the contrast. Being a carpenter, he had only Sunday to trim his lamps, sweep, dust, and make ready for service. Seven or half-past found him on hand; and Sunday-school at nine, bells to ring for that and the church, Bible-class meeting after church, then home to dinner and back to light up and ring for evening service at early candle light. Nine o'clock usually found all dark and quiet at the church and he on his homeward way. What time to think or rest for the next day's duties? Ah, well, he rests well now, poor man, I trust, for he is sleeping under the sod, "till the day of judgment," as the good Baptist brothers say.

Ah, friends, God is good and just to all, and as I look up to the deep blue space above, which we childishly call Heaven, and think of the millions of other worlds floating and guided by the same Hand, my heart thrills with joy at the thought that the Power which controls them and fails not, can but be true to me and my actions, if I am but true to my self according to my ability.

I notice that your correspondent, "P. F. P.," thinks my reasoning to strong for an invalid or too weak for a well brain (?). Ah, friend, we are *all invalids* only varying in degree and intensity. Point out the well man or woman and I will be glad, for in my weakness all I meet give me their sympathy *through their own infirmities*, supposing, doubtless, that misery likes company. Then, again, invalid brains are only weak, disabled brains, not always vitiated or narcotised by bad habits, tobacco and liquor—unless, indeed, drugged as many are with medicines, in the vain hope of *purifying by adding impurities* to the system.

I cannot, of course, attend church very regularly, in my invalid condition, but I judge the teaching by the lives of those who do listen week after week, and is not that a sage way to judge? "One man cannot be everything," but if you "are not so sure that we can break a physical law without violating a moral precept in the same act, or its consequences," why is it not the preacher's duty to try to stop the breaking of a physical law, if in so doing he is *preventing* the violation of a moral precept? That's the very point, though I don't wish to "quarrel with them." Oh, no; only to beg the young men just starting on their Master's work to combine the physical with the moral and spiritual laws, both by precept and example—giving up all habits that tend to demoralize brain and body, and fearlessly advocating simplicity in life. I would simply, yet earnestly, beg all teachers to seriously consider this matter, and so work for the common good of all. I blame them not for the good they do, but pray that that should not be neglected which so much needs to be done.

CAMPING OUT.

BY BUSY BEE.

Dear mothers and house-keepers, did you ever go camping? Those who never have, know nothing of its attractions; and those who have, will agree with me I am sure, in saying it is splendid. Just take your little children, and a tent and all the requisites of a camping expedition, and go somewhere every summer. It does not matter much where. Right here in our own mountains I have spent many happy days with my family camping. And how we do all enjoy it, and how good we all feel, and what appetites we all have! I know there are many who cannot go, and a great many who think they cannot, who might if they would, or really realized the benefit they might derive from a trip to the mountains of a few days. I know it is not always easy for us to go, there are so many little things to see to on a place. But we manage to go and take the children once during the summer, and oftener if possible. It is not necessary to go to the coast, where it costs more or less. There are plenty of beatiful streams in the mountains on either side of us, where we can find lovely places to make a camp and spend a week or month delightfully. There is nothing we enjoy better, and I think all families who can ought to give themselves this treat at least once a year.

San Jose, August, 1876.

Boys and Girls.

Farmers' Boys.

BY I. S.

Out in every tempest,
Out in every gale,
Buffeting the weather,
Wind, storm and hail.
In the meadow mowing
Where the old oak stood;
Every flitting moment
Each skillful hand employs—
Bless me! were there ever
Idle farmers' boys?

Though the palm be callous,
Holding fast the plow,
The round cheek is ruddy,
And the open brow.
Has no lines or furrows
Wrought by evil hours.
For the heart keeps wholesome,
Trained in Nature's bowers;
Healthy, hearty pastime,
The spirit never clogs;
Heaven bless the manly,
Honest farmers' boys!

At the merry husking,
At the apple-bee,
How their hearts run over
With genial, harmless glee!
How the country maidens
Blush with conscious bliss,
At the love-words whispered
With a parting kiss!
When the winter evenings,
With their social joys—
Bless me! they are pleasant,
Spent with Farmers' boys.

OUR CORNER.

Well, children, another month finds us here again, as new and fresh as ever. There is one good thing about the Agriculturist, it is always new until the next number comes out. It is not like a daily paper, nor like a mushroom to grow up and get old all in the same day. It is good for a whole month, and then good to file away to be bound into a book at the end of a year to be new until the next volume is fresh bound. And after my little nephews and nieces grow up, what will afford more real enjoyment than to look over the old letters they are now writing to the Agriculturist, if they but preserve the numbers in binding?

Another summer has flown, and now comes autumn. As the weather grows milder after the summer heat, how refreshing the air, and how grateful to the palate the luscious fruits! The vegetation which has kept green during the summer always takes a new start at this season, and grows again as spring-like as possible. You will notice the pumpkin and melon vines showing this new growth very plainly. Everything freshens up by the cooler days and damper nights.

Now is a good time to start cuttings of flowers and plants, and to plant seeds of perennial plants and flowers, so the plants will bloom next summer. Ask your papas and mammas to show you how to do it, and how to take care of them.

THE GAME OF DIXIE.

Mary C. wants to know what games Aunt Polly used to play when a child. Well, very much such as you now play. I will tell you one that used to amuse us a good deal. It is an active game and takes spry children to excel at it. It is called "Dixie's Land," and I do not see children playing it now. You mark off a piece of ground twelve to twenty feet across which is called "Dixie's land," and on either side are places marked off called "base." One is appointed to be Dixie, and is his or her duty to guard Dixie's land from intrusion. The game is to run across Dixie's land without being caught by Dixie before reaching base. When over a dozen were playing at one time we used to have two Dixies and lots of fun. The one caught must be Dixie until he or she catches another, who in turn is Dixie.

And now for our letters:

Milpitas, August, 1876.

Dear Aunt Polly: I have tried to make out the puzzles. Although I had some one to help me at first, I though them very hard, yet after I studied them they came very easy. The answer to Daisy Glock's is "Animal;" to L. W., "Boy;" to the rebus, "Love me little, love me long." I found five trees and flowers—elm, pansy, sweet-pea, sycamore and cedar. The answer to Mary Clark's rebus is, "Open your mouth and shut your eyes and I will give you something to made you wise." The answer to Daisy's last puzzle is "Lazy," and to the word-puzzle, "Hyacinth."

Here are two new puzzles:

I am composed of five syllables.
My first syllable is an abbreviation of a girl's name.
My second is a kind of grain.
My third is to pick.
My fourth is a number.
My fifth is a part of the body.
My whole is a welcome visitor to many families.

Take *o* from a city in Nevada and leave an animal. Take *r* from a city in France and leave an animal. Take *a* from a city in Norway and leave what we all should be. Your Niece,

Tillie.

Livermore, August, 1876.

Dear Aunt Polly: I have not forgotten you, and never will. I go six miles to school every day in a buggy. I study reading, arithmetic, grammar, spelling and geography. We do not know many games to play. I wish you would please tell me some that you played when you were a little girl. I think Miss Otterson's little children must have a nice time riding in the morning and in the evening. I like to ride horseback better than in a buggy. At school my cousin and I, and some other little girls, ride the horses to water, nearly half a mile. We have splendid fun that way. Last Friday, as some other girls and I were loping along, suddenly one of the horses which had two girls on began to trot real hard. The smaller girl said, "I'll fall!" and before she knew it she fell off and pulled the other girl off, too. Oh! how we did laugh! For they were not hurt, and jumped up laughing. Then they mounted again, and away we went.

I send a diamond puzzle. Here it is: 1, a consonant; 2, to hasten; 3, a tract of land; 4, an animal; 5, a consonant.

Your Niece, Mary C.

Mary and her brother Tommy also send answers to Daisy's puzzle, to the word-puzzle and the word-rebus. Tommy also sends an enigma. Here it is:

I am composed of 63 letters.
My 31, 40, 45, 56 is a headland.
My 38, 26, 20, 62, 28, 17, 19, 51, 58, 39 is an animal.
My 9, 61, 25, 55, 48, 11 is wealth.

My 40, 53, 50, 46, 14 is to astonish.
My 6, 34, 50, 47, 37, 57, 54, 10, 52, 7 is throwing back.
My 3, 59, 36, 13 is a girl's name.
My 44, 41, 12, 16, 8 is to unfasten.
My 53, 1, 2, 27, 23 is a part of the body.
My 43, 5, 24, 42 is a body of water.
My 29, 52, 58, 54 is a part of the body.
My 22, 21, 49, 18 is to desire,
My 33, 56, 60, 63 is inferior.
My 32, 30, 42 is performed.
My 4, 48, 15, 35 is a coin.
My whole is very interesting.

CONCORD, August, 1876.

DEAR AGRICULTURIST: My boy Richard desires me to write a few lines to you as he feels some delicacy in writing to a newspaper editor. He has had no practice in writing letters. He incloses the amount of his subscription, and wishes to say he has not sent it before on account of "scarcity of money." All the family, consisting of four girls and two boys, are delighted with your paper, and are receiving much pleasure and profit from its perusal, as do I also. When we get a little leisure, will give you a few items from this county.

Yours, respectfully, F. W. LEWIS.

Aunt Polly persuaded the Editor to let her put this in the "Corner." Richard need not be afraid of editors. They are no bigger not better than other people. The AGRICULTURIST editor used to be a farmer's boy, and did the chores in ragged, dirty clothes with bare feet, like any other urchin. He would only feel proud now to have the little boys notice him enough to write to him. But Aunt Polly wants Richard, and all other good boys and girls, to write to her. Surely they are not, any of them, afraid of their dear Aunt Polly, who loves them so much. Little boys and girls are what men and women are made of. Be good, and you will make good men and women.

A HIDDEN PROVERB.

A proverb is buried in these lines—one word in each line:

I rose one morn and said to John,
"My man, just put the saddle on
My horse, that I may take a ride;
Just lead him to the other side
Of the house; I would a journey go,
If my good horse will take me; so
He's had enough, I hope, to eat,
And water, too, to drink.

"'Tis but a journey short I take,
Ten miles, not more, I think.
I wish to see the men who say
They cannot come to make the hay;
So now make haste, I must away;
Come and lead him out, John, if you think
He's had enough to eat and drink."

CONUNDRUMS.

Why is an over-worked horse like an umbrella? It's used up.

Which is the worst place for a rum-hole? A man's face.

What is the best motive for riding a man on a rail? A locomotive.

ONLY A PEBBLE.

BY D. G. INGRAHAM.

"It was only a pitiful pebble after all," said Johnnie, as, seating himself on the doorstep, he untied his shoe and shook out the cause of his frequent impatient exclamations during our afternoon walk.

"Yes, Johnny," I said to myself, as I sat in the easy chair in my study; "the poor, despised pebble! Mankind have worshiped the mountain at whose foot it lay; art has transformed the marble block into images of the great among men; the diamond washed to the surface by the streamlet has been polished and set in the crowns of royalty—but here lies the pebble, their 'poor relation,' unnoticed and unknown."

Did you ever think how important a part the pebble has played in the great drama of the earth's development? Poor, insignificant little fellow—so we think him—despised even by a scratching hen! But, however humble his present position, his tribe has received high honors in its day, and has a record it need not blush for.

The pebble descended from the kingly race of rocks. Long ages since—we know not how long ago, for history records only the deeds of perishing men—a noble rock lay firmly grounded near the summit of a lofty mountain. So high was his head above the green valleys below, that it was white with ever-renewed snows. One morning Monseigneur Granit was rudely awakened and pitched from his majestic couch by an earthquake. He felt himself sliding and rolling down over icy cliffs and dizzy hights each moment faster and faster. At the foot of the mountain he struck with a stunning thud against a brother rock, and was shivered into a thousand pieces, from the size of a meeting-house to that of a hazelnut. The swollen torrent of the river upon whose bank the fragments had been cast soon began rudely and unceremoniously pushing and rolling his lesser fragments down stream. As they rattle against one another their sharp corners are worn off and their sides polished by the constant abrasion. They journey on for miles, sometimes stopping for long rests of centuries in the mud and sand, only to be aroused and hurried forward by the restless waters. They sometimes overtake others of the same race and kindred, but of different colors and complexions. Some are white and nearly transparent, others are green, or purple, or blue, and of every shade and hue imaginable. All smoothed and rounded and polished by their long journey and rude jostling. They pass huge bowlders of granite so heavy that the flood cannot move them; they are themselves beaten in the oceanward race by sparkling grains of sand; they mingle with fragments of shade and flakes of mica that are making the same journey in obedience to the same power.

But they all claim descent from the royal family of rocks, that stout-hearted race that fire and flood could never conquer in the early days of Mother Earth; and now here they lie before me on the beach, the lashing waves washing their faces into renewed cheerfulness and beauty at every surge.

But do you ask what has a pebble ever done? Like many other equally obscure individuals, the pebble has had a duty to discharge, and nobly has he done it. Could he speak he might say, "War has carried me into slavery and sent me on messages of pain and death. Ages before the needle-gun and *mitrailleus*, before even the spear and cross-bow, your rude and barbarous ancestors threw me from the sling. Strong men have groaned in the hour of battle when I have struck them. The "smooth stones" which brave little David chose to kill Goliath with, were my cousins; kings and mighty men have I slain, thrown from a sling. I might say I have conquered a world. But peace has claimed me, too, and science and commerce are my debtors. The lens, whose strong arm has rift the heavens above you, is my brother. The nebula, the stellar cosmos, the fiery comet that frightened your forefathers have become familiar friends by the meditation of our family. Mt. Cenis yielded to my keen edge and your persistence.

"My humbler brothers, too, have helped in other ways. I have been carried thousands of miles holding steady the keel of the vessel and making her obey the helm. For miles around the city of New Orleans, where the great Father of Waters drags sluggishly along over sand and mud, you cannot find a pebble—not one. Yet as you ride in carriage or omnibus along the street you are surprised and annoyed at the constant thump, thump, over the rough pavement of cobble-stones. We came from the "Granite State" and the 'Old Bay State,' holding steady the empty schooner which was to carry back the bulging cotton bales.

"And now, lastly, let me tell you how one of our race found his way into literature, and if he did not find a tongue himself, saved an eloquent one from obscurity. Long years ago a young orator of Greece sauntered down to the sea shore to declaim his speech, that his voice might gain power and depth amid the thunder of the lashing waves. The barrier to his success had ever been a lisping tongue. A little pebble glistening in the sunbeam as the waters retired attracts his eye. He raises the tiny rock and places it in his mouth. It is but the pastime of an unthinking child, but speaking with the pebble in his mouth he finds his impediment removed. The tongue so eloquent lisps no longer. The last defect of nature is supplied, and Demosthenes is saved to the centuries by a pebble!"

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* Contributed. † Editorial.

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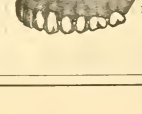

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VOL. 7 CALIFORNIA No. 10

AGRICULTURIST

AND

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1876

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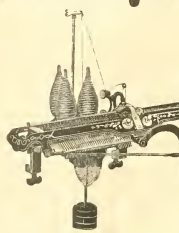

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 7--No. 10. | SAN JOSE AND SAN FRANCISCO, CAL., OCTOBER, 1876. | SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

ALARMING DISEASE AMONG CHERRY TREES.

Several cherry orchards about San Jose have, within the last two or three years, showed the presence of some disease which has alarmed and puzzled the orchardists not a little. The trees, one by one, in portions of the orchard, would commence dying at the top. The topmost limbs would die first, and so down till, in some cases, the entire tree would die. In others, after a few of the main limbs died, the trees would take a new growth from the bottom limbs and show signs of recovery. We have visited several orchards and undertaken to ascertain the cause. No orchardist could account for the trouble. There were no signs of insect stings or poison in the diseased parts. Some thought the hot sun had scalded the upper limbs, which were apparently not sufficiently supplied with the circulating sap of the tree. We concluded that the trouble must be somewhere in the root, as we knew that a disease of the root would affect trees in just this way. Cherry trees, orange, and some other trees, growing in soil with a heavy, wet, stagnant sub-soil, have been known to suffer from rotting of the lower roots, which the trees would first show signs of in the top, just as these cherry trees do that are affected. But in this case the cherry trees are growing in high, light, well drained soil.

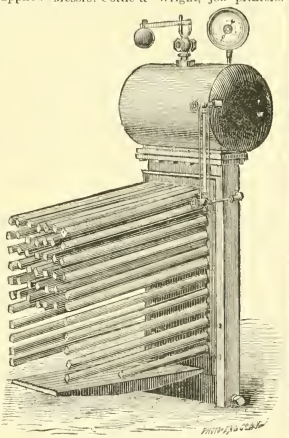
We had an idea that a bed of gravel might underlie the surface soil a few feet down, and that the roots running into this might become affected by a dry, fungoid rot. So, after due consideration, we went into Judge Archer's orchard, and with his man, spent half a day with spades hunting for the cause. We first ascertained that the trouble was not in the sub-soil. But after a careful search about the crown of the roots and trunk, we found that every tree that showed signs of disease had been gnawed by gophers. A little gnawing about the roots would cause a slight affection at the top of the tree, and a tree two-thirds or three-quarters girdled about the roots would be diseased in like proportion.

The gophers do not gnaw the roots off, but girdle close about the trunk where the roots branch from it. Several trees which we found dead were entirely girdled. A number of trees showing signs of recovery had been gnawed some last year or the year before, and not any this season.

Cherry trees are too valuable to be damaged or lost in this manner. Fair-sized trees will yield in value from $20 to $50 each season to the tree. Now that the cause is positively known, and the mystery dispelled, we trust that means will be at once taken to destroy the gophers. A few hundred dollars spent for traps and poison and labor will pay the biggest kind of a per cent. by saving valuable trees from further damage and destruction.

Every grower of cherry trees knows how damaging to a tree is a large wound of any kind. The removing of a large limb may, by the exuding of gum, cause the death of the tree. The gum exudes badly at the roots where the gophers gnaw away the bark, but the dirt acts as an absorbant and has a curative effect. A cherry tree may recover from some gnawing, but cannot withstand much without severe injury. Nothing less than complete extermination of all gophers in orchards should satisfy.

The office of the CALIFORNIA AGRICULTURIST has been removed to 338 First street, in the same rooms occupied by Messrs. Cottle & Wright, job printers.



Boiler with Fire-box Removed—showing position and arrangement of tubes and grates

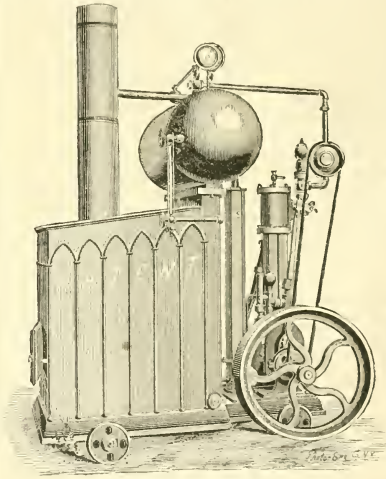
TEMPERANCE HALL.

Mr. Jesse Hobson, the noted temperance worker of San Jose, has just completed a new building, on the corner of Ninth and St. James streets, to be devoted to temperance and education. This he has done at his own expense, for the free use of the community. As it is just opposite the Editor's residence, we feel particular pleasure in noticing the fact. It is better than a whisky saloon opposite one's door, such as existed where we once lived on Third street.

Long live Jesse! say we, and may his voice continue to ring out for temperance, education and reform!

KING'S PATENT BOILER AND ENGINE.

We do not make a practice of advertising anything on this page for pay, but admit the cuts of this splendid engine as an advertisement here, *believing it to be the very best engine and boiler, for such purposes as it is designed, that was ever yet manufactured.* Several of them now in use in San Jose give better satisfaction to the persons owning them than any others have ever done. Mr. W. W. Cozzens and Mr. Oliver Cottle, both orchardists in the "Willows," have them, and find that they use less fuel than any other boiler and engine of like capacity and power. The proprietors of the San Jose Feed Mill, on the Alameda, where they grind all kinds of grain for feed at $2 per ton, tell us that it is the best boiler and engine they ever saw. They cannot say enough in its praise to do complete justice to it. Mr. Tarleton, orchardist, San Jose, who already has a first-class boiler and engine, bought new this year, and who has thoroughly examed the merits of all the leading ones, regrets that he had not seen this one before he bought. Mr. Joseph Holland, orchardist, San Jose, has been the rounds trying all the different engines, and making inquiries to ascertain the comparative merits of each before ordering, and will take this kind. He recognizes several important points of superiority over any other. One of the smallest size—a two-horse power—is now in operation in the *Argus* office, First street, San Jose, to run the new cylinder press just set up in their new rooms.



Engine and Boiler Complete.

The illustrations here given will show the peculiar construction of the boiler. Instead of flues surrounded with water, tubes holding the water to be heated are surrounded by the flames. The largest possible heating space is thus gained, while at the same time there is no large body of water or steam subject to explosion.

There is no safer boiler made, or one more economical of fuel. The engine is not close enough to the boiler to get heated, although it rests upon the same cast bed-piece. The crank-motion is at the *base*, thus avoiding unnecessary strain and jar. It is mechanically a triumph in every respect; easy to understand and to run, safe from destructive explosions, and cheaper and more economical than any other of equal power.

Its merits deserve to be understood. Mr. R. E. Wilber, 450 First st., San Jose, is the sole agent for this Coast. Persons wanting engines sho'd at once acquaint themselves with the advantages of King's Patent Boiler and Engines.

Mr. Wilber will forward further information to any address upon application.

There are several sizes and different powers, and all orders can be filled within reasonable time. This machine has only begun to be introduced on this Coast, but the names of all persons using them here will at any time be cheerfully given to such as may wish to make inquiries of them as to how they like the King Boiler and Engine.

The Honey Country.—One peculiarity about the honey region in Southern California is freedom from fogs and cold winds. Although near the sea, the climate is singularly favorable for the flight and continuous working of the bees.

CALIFORNIA exchanges will confer a favor by noticing that this journal is offered three months on trial for ten cents.

California AGRICULTURIST AND Live Stock Journal.

$1.50 Per Annum.

PUBLISHED MONTHLY BY THE

CAL. AGRICULTURIST PUB. CO.

S. HARRIS HERRING, Editor.

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Per one Column ..... $12 00 Per Month
" half Column ..... 6 00 " "
" fourth Column ..... 3 00 " "
" eighth Column ..... 2 00 " "
" sixteenth Column ..... 1 00 " "

☞ We are determined to adhere to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.]

EDITORIAL NOTES.

What do you think of "The Gipsy Girl"? We shall never make an offer of any premium of an inferior or "cheap" order. It is as much for our interest as yours to give satisfaction, and we shall ever aim to squarely do it.

To Our Friends.—Every one of our subscribers who likes the AGRICULTURIST is specially requested to send us in the names of friends and neighbors for three months on trial. We mean business, and know that two thirds of all who read the CALIFORNIA AGRICULTURIST three months will subscribe for a year. Send us the names, and we will take the chances any way.

The present hard times for money, low prices for produce, etc., set people to seriously thinking about economizing in every way. Of course, no intelligent person looks upon providing suitable reading for a family as extravagance. It is more of a necessity in our present condition of civilization than a mere luxury. But where the amount of money to pay for reading is limited, this journal, at only $1.50 a year, has stronger claims for patronage than many higher-priced ones. At any rate, it will give as much for a little as any other paper published.

A Little More "Aid."—The so-called "fruit distillers" are making extraordinary efforts to get clear of the government tax, and say that without such "aid" "the interest must suffer," etc. Let is suffer, say we, till they are driven to make a better use of it than rotting and manufacturing it into a pois to ruin mankind. Convert your grapes and other fruits into food, such as raisins, dried fruits, canned fruits, pork and other meats. As though there were no BETTER uses for fruit than making liquors! Verily, "alcohol is a thing evolved out of a rotten substance. It is the terrible essence of decay; it is the very living spirit of the putrid. Science has shown that it is neither food nor fuel. It is simply an irritant, and this was its effect from its first titillation to its last agony in delirium tremens. It is a lying spirit. Its distilleries can be honestly gauged by no government under heaven, nor its treacherous drug fairly meted out by any measure yet invented by man, nor its taxes honestly paid under any system of revenue. The worm of the still is crooked in the grain and cannot be made straight, and it is a worm that dieth not, that gnaweth ever.', It is a "business" by which a few are trying to live off from others' degradation and ruin. It is perfectly natural that they should try to evade the tax. While we are opposed to licensing any evil, we hope to see no special favor to such as are in our own State and midst. By the way, we notice that the fruit distillery No. 187, belonging to T. A. Giaque and situated at Hot Springs, Napa county, was seized last month by Deputy Collector Frost, of Sacramento, for violation of the revenue laws in shipping liquors without stamps. The property seized is valued at about $9,000, and includes 650 gallons of proof spirits and 26,100 gallons of wine. The seizure was made upon the complaint of agents Crane and Clark, and United States District Attorney Coghlan has been notified to begin proceedings for confiscation. We wish there was a law to destroy all such confiscated stuff.

"Hard times" is no idle cry. Times are hard, and will be harder before they are easier. The causes, which are national, will not be removed by either the Democratic or Republican parties, whichever may elect their President. Both platforms are pledged to "hard money and contraction," at the dictation of bondholders and Shylocks in both Europe and America. The money power is held, not by the people in the interests of the people, but by their creditors, and in their interests solely. Industry is taxed and nearly strangled to death. Thousands are compelled to be idle, and while real estate, and manufacturing and producing run people in debt, and all real values depreciate, money extorts unjust tribute and grinds into lower depths a suffering people. Gold, which we have not, is demanded for payment of bonds and interest on debts contracted with paper money. Our honest, non-interest-drawing national paper is being withdrawn from circulation. Bonds deposited with Government will draw 6 per cent. interest in gold, and an issue from Government of more than twice the amount deposited in national bank notes, which are drawing from borrowers 12 to 25 per cent. more annually! This we mention as but a sample of the way the financial affairs of this Government are now being run. High salaries and premiums for rascality, monopolies and a hard-money aristocracy are in the ascendant, and are bound to triumph until such a revolution is inaugurated in this country as shall sweep everything before it. The sooner such of us as are in debt sacrifice whatever is necessary to get out, the better. No such crushing force was ever before set in motion to despoil labor, rob industry and discourage honest enterprise. Such of our people as have homes and can make a living by producing the most of what they consume, independent of the world, are the ones who will suffer the least. It behooves everyone to husband his resources, get of debt in, keep out, economize, and so ward off from his own and his family's heads as much of the surely impending ruin as possible. Our nation is already bankrupt; our industries are paralized; our people are virtually enslaved to the money kings and their allies, who are in every way drawing closer the strings that ensnare us, and who are squeezing out the earnings and even the vitality of productive labor. It is none too soon to sound the tocsin of alarm. Let him who is not blinded take heed.

Employ the Boys and Young Men. The following circular explains itself, and should be memorized:

YOUTHS' DIRECTORY AND BOYS' SHELTER, 530 Bush st., S. F., Sept. 9, 1876.

In furtherance of a good cause, please inform your readers, especially in the rural districts, that we constantly have on hand a large number of strong, active, honest, responsible young men from 15 to 21 years of age, most of whom were born in this country (no hoodlums or puny striplings), who are ready and eager for any opportunity to render faithful service by contract at the rate of 50 cents per working day, beside board and lodging, with fare advanced, the latter to be deducted from their earnings. We make no charges to employers or employees. This institution is maintained by gratuitous contributions.

Help our boys against the encroachments of the Chinese coolies in their competition for labor. In the battle of life and the struggle for existence on this Coast, let the fitter race, the higher type of humanity survive.

Respectfully yours, A. P. DEITZ.

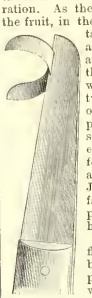
We will add here that Judge Archer, of San Jose, employed boys this season to gather his cherry crop, which netted him over $3,000 clear of expenses, and he was well satisfied with their work. Give the boys a chance to make worthy, industrious men, by making a living and learing how to do business for themselves. Upon the saved earnings of a few years, the young men who get steady employment can go into business for themselves. The hope of this nation is young men and boys. Let us all do our duty by them.

Short-horn Beef and Milk Stock. We visited Col. Younger's herd of Short-horns while they were in training for the State Fair. There can be but one opinion concern ing his stock by any unbiased judge of good stock that visits and examines them on the Forest Grove Farm. They are all carefully bred, well cared for, and, by constant intermingling of best strains of noted breeds, are being constantly improved. The Col. makes the science of breeding a study and practice. While most herds of Short-horns are being bred for beef-making points alone, or to pedigree irrespective of points, this herd is noted for its fine milking qualities. There are several as fine milch cows among them as can be found anywhere. This is of more real value, and a better recommendation to this herd than many might imagine. In fact, for this State, such fine milk stock is invaluable. We did frame out a special article on this subject, but other matters prevent its appearance.

Floral Work for the Month. The planting of bulbs for early blooming should be done this month, in raised beds, so that no water will stand upon them during the winter. Prepare the soil and plant, in this climate, just the same as Vick or Trumbull advise in their catalogues, which may be had for the asking. There is nothing that will give better satisfaction in a garden than a good selection of flowering bulbs, properly arranged and cared for. Send for the catalogues and be governed by advice found there.

TARLETON'S CLING STONE FRUIT PITTER.

Our friend Mr. G. W. Tarleton, a leading orchardist, has just invented a simple little device for removing pits from cling-stone fruits. The illustration we here give will show what it consists of—a half circle cutting attachment to a common knife-blade, with this instrument the fruit is halved and pitted at one operation. As the knife is drawn around the act of halving, the attachment is drawn over and fitted about the pit, and follows it around as the knife is turned, so that when the fruit is cut in two the pit is also scooped out as clean and slick as possible. Everyone who sees it work is filled with exclamations as to its perfect working, simplicity and excellence. The San Jose canning and drying factories have had a supply made at once, and are highly pleased with them.



The superior excellence, firm flesh, and size and beauty of cling-stone peaches and plums are well known. Heretofore, the trouble of pitting has been a serious objection to them for canning and drying. Now that this is overcome, there promises to be a revolution in orcharding and in the nursery business. Clings will be all the rage, and in demand at high prices.

Mr. Tarleton is a natural mechanic, and has invented and improved several useful implements before. This, we believe, is the first upon which he has applied for a patent. So struck were we with it at once, on seeing it work, that we exclaimed, "Mr. Tarleton, this little invention is worth more than your $40,000 orchard, although yours is the best in the State of its size."

LETTER-WRITING.

We receive a good many letters that puzzle us to find out from where or whom they come. Letter-writing is so simple that everyone should know how to do it so that nothing is left to guess at. If Mr. Poodue, of Poodueville, Hop-scotch county, Alaska, were to sit down, the 15th day of October, to write a letter, he should commence thus:

Poodueville, Hop-scotch Co., Alaska, October 15th, 1876.

Then, were he addressing the publishers of this journal, he should next say:

PUB. CAL. AGRICULTURIST:

And go on in a direct manner to say his say, as the business on hand may demand. After he gets through he should wind up with

Respectfully yours,

signing his name clearly in full,

HORATIO POODUE.

This will let the publishers know—1st where the letter comes from; 2d, the month, day and year it was written, 3d, who it is to; 4th, what it contains, and 5th, who the letter comes from—all of which are equally important in a business letter. Observe these five rules, count them on the five fingers of your right hand, and when you write, see that each rule is observed, and accept our thanks.

Remember the AGRICULTURIST office is now at 338 First street.

Poetry.

The Flood of Years.

BY WILLIAM CULLEN BRYANT.

Mighty Hand, from an exhaustless urn,
Pours forth the never ending flood of years
Among the nations. How the rushing waves
Bear all before them! On their foremost edge,
And there alone, is Life; the Present there
Tosses and foams and fills the air with roar
Of mingled noises. There are they who toil,
And they who strive, and they who feast, and they
Who hurry to and fro. The sturdy hind—
Woodman and deiver with the spade—are there,
And busy artizan beside his bench,
And pallid student with his written roll.
A moment on the mounting billow seen—
The flood sweeps over them and they are gone.
There groups of revelers, whose brows are twined
With roses, ride the topmost swell awhile,
And as they raise their flowing cups to touch
The clinking brim to brim, are whirled beneath
The waves and disappear. I hear the jar
Of beaten drums, and thunders that break forth
From cannon, where the advancing billow sends
Up to the sight their forces of armed men,
That hurry to the charge through flame and smoke,
The torrent bears them under, whelmed and hid,
Slayer and slain in heaps of bloody foam.
Down go the steed and rider, the plumed chief
Shinks with his followers; the head that wears
The imperial diadem goes down beside
The felon's with cropped ear and branded cheek.
A funeral train, the torches waving, the sad
Bearers and bier and mourners. By the bed
Of one who dies men gather sorrowing,
And women weep aloud; the flood rolls on;
The wail is stifled and the sobb up group
Borne under. Hark to that shrill sudden shout,
The cry of an applauding multitude
Swayed by some lond forensic orator who wields
The living mass as if he were its soul.
The waters choke the shout and all is still.
Lo, next a warring crowd and one who spreads
The hands in prayer; the engulfing wave o'ertakes
And swallows him and them. A sculptor wields
The chisel and the stricken marble grows
To beauty; at his easel, eager eyed,
A painter stands, the meaning of his touch,
Gathers upon the canvas, and life glows;
A poet, as he paces to and fro,
Murmurs his sounding lines, Awhile they ride
The advancing billow, till its fossing crest
Strikes them and flings them under while their taske
Are yet unfinished, See a mother smile
On her young babe that smiles to her again—
The torrent wrests it from her arms; she shrieks,
And weeps and tears her hair, and sinks down.
A beam like that of moonlight turns the spray
To glistening pearls; two lovers, hand in hand,
Rise on the billowy swell and fondly look
Into each other's eyes. The rushing flood
Flings them apart; the youth goes down; the maid,
With hands outstretched in vain and streaming eyes,
Waits for the next high wave to follow him.
An aged man succeeds; his bending form
Sinks slowly; mingling with the sullen stream
Gleam the white locks and then are seen no more.

Lo, wider grows the stream; a sea-like flood
Saps earth's walled cities, massive palaces
Crumble before it; fortresses and towers
Dissolve in the swift waters; populous realms
Swept by and disappear, their great and mighty tribes
Engulfed and lost, their very languages
Stifled and never to be uttered more.

I pause and turn my eyes and, looking back,
Where that tumultuous flood has passed, I see
The silent Ocean of the Past, a waste
Of watery wilderness, a gravare, its shores
Strewn with the wreck of fleets, where mast and hull
Drop away piecemeal; battlemented walls
Frown idly, green with moss, and temples stand
Unroofed, forsaken by the worshipers.
There lie memorial stones, whence time has gnawed
The graven legends, thrones of kings o'erturned,
The broken altars of forgotten gods,
Foundations of old cities and long streets
Where never fall of human foot is heard
Upon the desert pavement. I behold
Dim glimmerings of lost jewels far within
The sleeping waters, diamond, sardonyx,
Ruby and topaz, pearl and chrysolite,
Once glittering at the banquet on fair brows
That long ago were dust; and all around,
Strewn on the waters of that silent sea,
Are withering bridal wreaths, and glossy locks
Shorn from fair brows by loving hands, and scrolls
O'erwritten—haply with fond words of love
And vows of friendship—and fair pages flung
Fresh from the printer's engins. Where they lie
A moment and then sink away from sight.

I look, and the quick tears are in my eyes,
For I behold, in every one of these,
A blighted hope, a separate history
Of human sorrow, telling of dear ties
Suddenly broken, dreams of happiness
Dissolved in air, and happy days, too brief,
That sorrowfully ended, and I think
How painfully must the poor heart have beat
In bosoms without number, as the blow
Was struck that slew their hope or broke their peace.

Sadly I turn, and look before, where yet
The flood must pass, and I behold a mist
Where swam dissolving forms, the brood of Hope,
Divinely fair, that rest on banks of flowers
Or wander among rainbows, fading soon
And reappearing, haply giving place
To shapes of grisly aspect, such as Fear
Molds from the idle air; where serpents lift
The head to strike, and skeletons stretch forth
The bony arm in silence. Far her on
A belt of darkness seems to bar the way,
Long, low and distant, where the Life that Is
Touches the Life to Come. The Flood of Years
Rolls toward it, nearer and near. It must pass
That dismal barrier. What is there beyond?
Hear what the wise and good have said: Beyond
That belt of darkness still the years roll on
More gently, but with not less mighty sweep,
They gather up again and softly bear
All the sweet lives that were o'erwhelmed
And lost to sight—all that in them was good,
Noble, and truly great and worthy of love—
The lives of infants and ingenuous youths,
Sages and saintly women who have made
Their households happy—all are raised and borne
By that great current in its onward sweep.
Wandering and rippling with caressing waves
Around green islands, fragrant with the breath
Of flowers that never wither. So they pass,
From stage to stage along the shining course
Of that fair river to the ocean, life a sea,
As its smooth eddies curl along their way,
They bring old friends together; hands are clasped
In joy unspeakable; the mother's arms
Again are folded round the child she loved
And lost. Old sorrows are forgotten now,
Or but remembered to make sweet the hour
That overpays them; wounded hearts that bled
Or broke are healed forever. In the room
Of the grief-shadowed Present there shall be
A Present in whose reign no grief shall gnaw
The heart, and never shall a tender tie
Be broken—in whose reign the eternal Change
That waits on growth and action shall proceed
With everlasting Concord hand in hand.

Half-Way Doin's.

BY IRWIN RUSSELL.

Belubbed fellow trabellers: In holden' forth to-dey,
I doesn't quote no special verse for what I has to say,
Do serum will be berry short, an' dis here am de tex':
Dat half-way doin's sin't no 'count for dis worl' or de nex'.

Dis worl' dat we's a lubbin' in is like a cotton row,
Whar ebery culled gentleman has got his line to hoe;
And ebery time a lazy nigger stops to take his nap,
De grass keeps on a growin' for to smudder up his crap.

When Moses led de Jews acrost de waters ob de sea,
Dey had to keep a goin', jes as fas' as fas' could be;
Do you s'pose dat dey could eber hab succeeded in dcir wish,
And reached de Promised Land at last, if dey had stopped to fish?

My frien's, dar was a garden once whar Adam libbed wid Ebe,
Wid no one 'round to bodder dem, no neighbors for to thieve,
And ebery day was Christmas, and dey got deir rations free,
And eberyting belonged to dem except an apple 'tree.

You all know bout de story—how de snake come a stump-tail, rusty moccasin, a crawlin' on de groun'—
How Eve an' Adam eat de fruit, an' went an' hid deir face.
Till de angel oberseer he came an' drove 'em off de place.

Now, s'pose dat man an' 'ooman hadn't 'tempted for to shirk,
But had gone about der gardenin', and tended to deir work,
Dey wouldn't hab been losin' whar dey had no business to,
And de debbil nebber'd got a chance to tell 'em what to do.

No half-way doin's, brodren! It'll nebber do, I say,
Go at your task an' finish it, an' den's de time to play—
For eben if de crap is good, de rain'll spile de
Unless you keeps a pickin' in de garden of your souls.

Keep a plowin', an' a hoein', an' a scrapin' ob de rows,
And when de ginnin's ober you can pay up what you owes:
But if you quits a workin' ebery time de sun is hot,
De sheriff's gwyne to lebby on eberyting you's got.

Whateber 'tis you's dribin' at, be sure en' dribe it true,
An' don't let nuffin' stop you, but do what you's gwyne to do:
For when you see a nigger foolin' den, shore as you's born,
You's gwyne to see him come out ob de small end ob de horn.

I thanks for de 'tention you has gib dis afternoon—
Sister Williams will oblige ne by a raisin' ob a tune—
I see dat Brudder Johnson's 'bout to pass aroun' de hat,
And don't let's hab no half-way doin's when it comes to dat.

The Fogy Farmer.

A farmer lived in the Keystone State
On a hundred acres of soil,
He labored early and labored late,
And his hands were hard with toil.
He didn't believe in progress much,
And he thought t was very strange,
And said in his mind "it beats the Dutch"
That farmers join the Grange.

"For what's the use," said the fogy man,
"As I often tell my wife,
Hard work is better than any plan
To carry you through this life.
And a hundred tons of phosphate,
If you put it on the farm,
Won't do the good in this Keystone State
You can do with a single hand."

So he hardly took the time to dream,
And he filled his eyes with dust,
And he wouldn't thresh his grain by steam
"For fear the thing would bust."
So his neighbor Jones his wheat had sold,
In the nearest market town,
And turned his crop into solid gold,
Before he had his done.

And this fogy man, when he came to sell
In the quiet part of the fall,
Found the price of grain 'had fell,"
And got no price at all.
While Jones, the Granger, worked with brain
And not alone with hand,
At the sheriff's sale, came down the lane
And bought the whole of his land.

But he still thinks ignorance is bliss,
And says it's just his fate,
And never lays it all to this,
That he would not educate.
"He wasn't born with a silver spoon,"
And he says 'tis thundering strange,
And he hangs around a beer saloon,
But he hasn't joined the Grange.

Fraternity.

MRS. R. W. BRAINARD.

The farmer plows and the farmer sows—
The heat on the blacksmith's anvil glows,
While under the weight of his brawny hand
The plow is forged for the farmer's land.
Clasp hands! ye brothers in honest toil,
Ye sturdy sons of the mother soil!

The farmer reapeth the golden grain—
The miller weareth the creaking wain
That brings his share of the common toil,
And marks his rank with sons of the soil.
Clasp hands, ye brothers! a triple power
That gives the nation a farmer's dower.

The farmer clippeth the fleecy wool,
And plucks the bolls of cotton full,
The weaver bends to his noisy loom,
And piles the webs in the crowded room.
Clasp hands! ye brothers, in friendly zeal,
Ye hold, united, a nation's weal.

Ho! farmer, gathering fruit and grain—
Ho! merchant, counting your loss and gain—
Ho! builder, modeling wood and stone—
Ho! sailor, reaching from zone to zone—
Clasp friendly hands! for a common toil
Binds all mankind to the mother soil.

—Son of the Soil.

An abundant harvest, and imploring printer.

Poultry Yard.

A FEW HINTS ON POULTRY.

POULTRY keeping in California is often attended with much vexatious loss and trouble. During the summer the hens get terribly lousy and covered with fleas, if not carefully attended to. Frequently they get diseased and die off strangely.

On most farms, where a few dozen poultry are kept, the fowls have no special houses or roosting places, but scatter around upon scaffolds in the barn, upon the partitions of horse stalls, upon piles of rubbish, fences, branches of trees, or wherever they can find a place to perch. If they get diseased or lousy it is almost impossible to get at them, or their roosting places to correct the evil. In fact, they are kept as a sort of tolerated nuisance, and are allowed to shift mostly for themselves; are plentifully fed when they can get it from the stack, and go hungry when they cannot find enough to eat. If all circumstances happen to be favorable, and the fowls do well—that is, lay well and raise a lot of nice chickens from nest stolen away—why, well and good, chickens are profitable to keep. But if, on the contrary, as most frequently happens, they do not lay well, only hatch out a few scattering chickens, and get sick and die off, why, somebody has no luck with chickens, and it don't pay to bother with them.

Now, there is no effect without a cause, and this simple admitted assertion will as well apply to the chicken business as to any other. There is a reason why chickens get lousy, diseased, poor and worthless on one place and do finely on another. It is not always in the soil, atmosphere, nor locality. It is certainly owing to favorable or adverse conditions. Care and proper treatment will obviate any difficulty of location, but the most favorable location will not make all right under indifferent circumstances.

The experience of poultry raisers for many years have proved some things, and sufficient reliable data can be found on which to predicate some sound advice.

Chickens and other fowls should have pure air to breathe. At night this cannot be obtained in a privy, pig-sty nor closely over the filthy accumulated droppings of months, under a shed. They should not be exposed to the full draft of wind and to storms, but better this than bad air. Their roosts should be kept clear of vermin by frequent washing with kerosene, soap suds, tobacco, and lime wash, or something that will destroy lice and prevent a deposit of vermin eggs, on the roosts. A clean, open house that can be kept clean is the best, although evergreen trees make good roosting places. The nest boxes should be kept clean, and be supplied with clean straw, and sprinkled with sulphur.

An open range is desirable when convenient, but fowls may be kept in close quarters if kept clean and allowed good wallowing dust beds. Clean, pure water should be supplied in quantity for drinking. Much depends upon this. Many chickens get diseased upon impure water. One cannot be too particular about clean water for fowls.

When it comes to feeding, a good deal can be said. Above all, clean food should be supplied, and foul, decaying substances, of animal matter particularly, should not be put within their reach. Fowls are fond of meat, insects, etc., and should have such food. Wheat is pro-

bably the best single grain for chicken feed, but a variety is better than any one kind of feed. If chickens have all the wheat they want and a variety of other grains to pick at, they can best select what they want and need. Milk is an excellent feed, and should always be given when one has it to give. Wheat bran mixed in milk is an admirable side dish for poultry, to be set where they can get at it continually,

We wish to call particular attention to the necessity of supplying green feed of some kind to poultry. In our climate, where, at this season, but little green is to be seen without irrigation, many lots of poultry are without green feed of any kind for months together. This is one leading cause of ill success. Poultry should have green feed the year round, and must have it, too, or some substitute, or they will surely suffer. They are great grass-eaters, and must have some succulent feed to keep healthy. Hens are scratchers and should have some place to scratch, and something to scratch for. At this season, on most places, the ground is hard and unyielding. It should be plowed and harrowed up to encourage the chickens to scratch and wallow in the dirt. If the wheat for feed is sown thickly and harrowed in so that they will have to scratch to find it, it will give the fowls employment and healthy exercise.

Much more might be said upon this subject. But a few rules observed, a thorough system pursued, and common sense and good care used, will in every case pay in rearing poultry on the farm.

HATCHING CHICKENS.

The best season in which to raise broods of fine, healthy fowls is in the fall of the year, in California. The cool, moist weather when the rainy season commences seems to be much more conducive to health of young fowls than the warmer and dryer season. Thousands of seeds are sprouted with the rains, the soil is softened, and there is better picking and scratching for them, something tender and green to pick up, and little annoyance from chicken lice at this season when nights are frosty.

Of course, shelter should be provided for young fowls, so that they can keep dry during storms in winter. But they should be allowed as much liberty, when large enough to scratch as the range will admit. Pullets raised from eggs set this month will be ready to lay in early summer, and when poultry is a good price the roosters can be disposed of to best advantage.

February is also a good month to sit eggs and hatch out chickens. As soon as hot weather commences, the hatching of chicks should cease for the season.

Fowls that are moulting, as most old birds are, just at this time, are of course unfit for marketing. This fact is not generally appreciated. But the moulting process is a species of skin disease, with domestic poultry; that is to say, during the weeks that the old plumage is dropping away, and the time that the new feathering is forming, the fowl's flesh is in a fevered condition, in consequence of the death and slow departure of the previous year's coating.

At such a period, the older fowls are quite unfit for the table, though thousands of such birds are kept by their owners up to this natural change in the fowl's life—which succeeds the laying of their annual litter of eggs, usually—and are then killed off, because they are commonly at such time in good condition apparently.

If these older birds are to be slaughtered at all, they should be killed before the moult commences, or they should be kept over to cold weather, or until their new feathering is fully out. This may be decided upon by taking your fowls from the roost at night, and examining the skin. If the body is covered with blue-shafted "pin-feathers," such birds ought to be kept till November or December before killing. If these pin-feathers have not yet begun to show themselves, then the bird may be properly used for marketing.

With fall chickens, the case is somewhat different, though it is dependent upon their age. Usually, by October the spring chicks' first moult is completed, and the pin-feathering is *non est* upon their bodies. But, in either case, if there be a show of this, upon examination, birds should not be killed, for eating. These pin-feathers may be scalded off, or picked out, through careful plucking. But no one who knows anything about the above facts will ever choose a chicken in market whose skin is covered with these offensive bine, dead-blood-filled feather-shafts, and no poultryman should ever kill a bird to offer for eating, young or old, that is going through its moult.—*Fancier's Journal.*

Raising Turkeys.—The most successful turkey raisers feed the chicks for the first few days of their lives upon finely chopped, hard-boiled eggs, and keep them from wandering off by cooping up the hen. After the chicks are a week old, scalded wheat, or oaten grits and cornmeal may be given, but until they are fully fledged, they should be carefully protected from rain storms and wet grass.

Domestic.

Woman's Work.

BY ANNIE HALLS.

To wash and bake, to mend and make,
The weary steps of toil to take;
To cook and scour, to dust and sweep,
And all the house in order keep.
To rise at morn and o'er and o'er
Do duties done the day before,
And know that in to-morrow's train
The same things will come o'er again,
And often to herself to say,
The old, old lines in weary way,
"From dawn of day till setting sun
Woman's work is never done."

To watch and pray, to gladly take
Love's crosses for love's crowning sake,
To love and grieve, to smile and weep;
Her deepest thought in silence keep.
To teach and lead, to hope and trust,
Have trust betrayed—a woman must.
To gently chide, to cheer and bless,
And bear with patient tenderness
Her burdens all; nor shrink away,
But bravely look ahead and say,
"From dawn of life to setting sun,
Woman's work is never done."

Preserving and Keeping Tomatoes.

Mrs. Roma W. Woods, in the *Western Farm Journal*, says:

The first and most important thing to remember is this: that all fruits which mature quickly, as rapidly decay; they simply reach perfection, and at once begin to die, and when decay has once commenced it cannot be permanently arrested. So I use under-ripe rather than over-ripe tomatoes. If they are free from soil or other dirt, they will not need washing before scalding. As you take the skin from each, slice it twice, and drop into your porcelain kettle. When nearly full pin a piece of mosquito netting over it, and put the kettle over the fire; stir frequently with a silver spoon or hard wood paddle, and when you are sure that the mass has all boiled, dip it out into your glass cans, which should be standing on several thickness of cloth, folded smooth, which has been wet in cold water; pour the hot water out of the cans, and fill nearly full. Leave them on the cloth and open, until you can hold your hand upon the side of the cans. Put on the rubbers, fill one can full of boiling water or boiling tomato juice, and put the top on, and screw it tight; and so on until your cans are sealed. Wipe each can thoroughly, first with a damp cloth, then with a dry cloth, and put them in a dark place until the next day. If they are perfectly dry you may put them away in a dark, cool place, and in winter keep glass cans where they will not freeze.

In preparing for the table (do not use iron or anything with the tin worn off to cook them in), season with salt, pepper, butter and white sugar; and when they boil up once, remove from the fire and dish them; too much boiling extracts the bitter principle in the seeds—standing in tin will also make them dark and bitter.

To make washing days more endurable on the farm, and less wearying to the female portion of the family, one of the men-folks should see to it, every Monday morning, that wood and water are provided in abundance. If the clothes can be collected the day before and put to soak, either in warm or cold water, all the better. Half the merit of the new soaps and washing powders which are continually being brought forward, and urged upon our attention as labor-savers, is due to the observance of the "rules and directions" which usually accompany them.

A fault of many economical housekeepers shows itself in the small quantity of soap used for washing clothes. It is both easier and cheaper, in the long run, to dissolve the dirt by the free use of soap, rather than attempt to rub it out by friction between the washboard and the hands. Bed clothes and many others may often be thoroughly washed by simply boiling them in soap suds, and then rinsing in clear water. Cold soap suds will dissolve much dirt, but hot soap suds will remove much more.

Moths.—Moths will work in carpets in rooms that are kept warm in the winter as well as in the summer. A sure method of removing the pests is to pour strong alum water on the floor to the distance of half a yard around the edges before laying the carpets. Then once or twice during the season sprinkle dry salt over the carpet before sweeping. Insects do not like salt, and sufficient adheres to the carpet to prevent their alighting upon it.

Rules for Action in Cases of Accident.—Professor Wilder, of Cornell University, gives these short rules:

For dust in the eyes, avoid rubbing; dash cold water in them, remove cinders, etc., with the round point of a lead pencil.

Remove insects from the ear by tepid water; never put a hard instrument into the ear.

If an artery is cut, compress it above the wound; if a vein is cut, compress it below.

If you are choked, go on all fours and cough.

For slight burns, dip the part in cold water; if the skin is destroyed, cover it with varnish.

For apoplexy raise the head and body; for fainting, lay the person flat.

Squash Pancakes.—Having some cold boiled squash left over one day, mother thought to experiment; so she mixed with it, after thoroughly rubbing all lumps out, 2 eggs, salt, a little baking powder, sweet milk and flour enough to make a stiff batter, and fried it on the griddle. They were delicious, and now squash pancakes are a regular dish at our house. They are light as feathers. —*Cor. Rural World.*

No meal should be considered complete without fruits. Laboring men are apt to consider them more as matters of taste and ornament than of use or nutriment. Often, in our ordinary eating, they are the one most important item lacking, and needed to keep the system in easy working order. I know it is not an easy matter to have fruits in much variety in early summer, unless we can draw on the last year's supply. The latter, however, we ought to be able to do, and now is the time to make the desired arrangements for another season.

Mr. Wm. Emerson Baker, a Massachusetts gentleman, who is described as an "eccentric millionaire," has turned over to ex-Gov. Gaston and four other trustees, a farm containing fifty acres of land, and added $56,000 in money for the purpose of founding a school of cookery. May it prove a success.

To make apple-tea, pour boiling water over roasted sour apples, and let them stand until the water is cold. This is a very palatable drink for invalids.

The Angora Goat.

An average quality of Angora fleece realizes, according to the fluctuations of the market, from 70 to 80 cents a pound. Pure Angora of the finest quality can be sold for a dollar. An average fleece will weigh from four and one-half to five five pounds, thus realizing from two to three times the present value of an ordinary sheep. The first cross with the common goat will pay to shear. The fleece of the third cross sells at 60 cents. A fourth cross fleece fetches from 70 to 80, and after that there is no difference from pure bloods. England imports 7,000,000 pounds annually, and mohair goods are in demand. When the business has proved a failure it has been for want of proper attention, or because the location is unsuitable. All animals valuable for fleece thrive best upon succulent food. Hence Angoras have proved profitable in all parts of Oregon where grass can be had the year round. The mountain counties of California are suited for the business because succulent food is there abundant in the fall. Snow does not hurt Angoras, although rain and sleet proves injurious. Those persons in Nevada who have engaged in the business have proved it profitable, and they have proved that Angoras will live through a hard winter upon browse, which is usually obtainable, notwithstanding there may be 10 or 12 inches of snow on the ground. California produced 30,000 pounds of Angora fleece last year, and this year's clip is estimated at 10,000 pounds more. H. H. Farr & Co, of the Holyoke Mills, Mass., and Hall & Turner, of Princeton, New Jersey, are ready to purchase all the mohair California can supply. Besides the fleece, Angoras are valuable for their pelts, which, when died, make admirable buggy robes.—*Cor. S. F. Bulletin.*

☞ If you want stocking and kitting yarn, send for list of prices and kinds to J. J. Pfister, dealer in the Lamb Knitting Machines, 120 Sutter street, S. F.

Horticulture.

CULTIVATION OF COFFEE IN MEXICO.

BY HON. JOHN W. FOSTER, UNITED STATES MINISTER TO MEPICO.

THE total product of the coffee crop of the world for 1874 is estimated at about 900,000,000 pounds,* of which amount the United States imported in 1875 one-third, or 317,970,665 pounds; which fact is sufficient to indicate the great interest which this country has in its production and cost. The chief coffee-producing countries are Brazil (whose product is about two-thirds of the entire amount), the Dutch colonies, the West Indies, the Central and South American republics, and Ceylon. Coffee was first introduced into Europe more than two hundred years ago, but during the last fifty its use has greatly increased, and of recent years the supply has not kept pace with the growing demand in the civilized world. In the United States the amount imported twenty years ago, in 1856, was 235,865,268 pounds, of the value of $21,573,558. In 1875 the amount imported was 317,970,665 pounds of the value of $50,591,488. But as the consumption is affected somewhat from year to year by the production, it is fair to estimate the average importation. The three years beginning with 1856 show an average annual importation of 221,800,000 pounds, of the value of $20,700,000; and the three years ending with 1875 an average annual importation of 298,700,000 pounds, of the value of $50,000,000. It will thus be seen that in the past 20 years the increase in quantity of imports of coffee has been only 34 per cent., which is 21 per cent. less than the increase of population, but that the increase in value has been 146 per cent. It will be interesting to make a comparison with the importations of the other table beverage, tea. The increased amount of importations in pounds (annual average) of tea from 1856 to 1875, inclusive, has been 136 per cent. or 81 per cent. more than the increase of population, the latter being in the past twenty years 55 per cent. The import consumption of coffee and tea per inhabitant, estimating the population in 1856 at 27,000,000 and in 1875 at 42,000,000, was as follows:

	1856. POUNDS.	1875. POUNDS.	PER CENT.
Coffee	8.24	7.11	Decrease of 13
Tea	.93	1.42	Increase of 54

Comparing the consumption of coffee and tea with the population, it is thus seen that the increased consumption of coffee has fallen behind the increased population, while that of tea has very largely exceeded the growth of the country, and that there is actually less coffee used per capita than twenty years ago. The reason of this is not found in the decreased popularity of coffee as a beverage as it holds a place in the taste of the American people much above tea; but the explanation is justly to be attributed to

THE GROWING DEMAND FOR COFFEE THROUGH THE WORLD,

and the failure of the production to keep pace with that demand, which has greatly enhanced the price. The price in gold of tea at wholesale is to-day as low as it was in 1860, before the civil war,† while coffee is nearly double the price of 1856 and 1860. These statistics are given to show that the United States are deeply interested in the increased production of coffee, and in finding new and more accessible sources for its supply of this article, of which it is a much larger consumer than any other nation in the world. It may be an unknown fact to many Americans that at our very doors, in Mexico, our neighboring republic, there exists the agricultural capacity to produce all the coffee that can be consumed in the United States, and of quality equal to the best grown in any country. Mexico, it is true, is exporting very little coffee, and scarcely figures in the coffee-producing countries, but its capacity and adaptability for its production have been tested by more than fifty years of successful cultivation. The topographical and climatic character of the country is admirably adapted for this purpose.

THE COFFEE-PRODUCING REGIONS,

The great Andean mountain range coming up through South and Central America, greatly depressed in the Isthmus of Tehuantepec, apparently for the passage of the commerce of the two oceans, suddenly springs up in Southeastern Mexico into lofty cordilleras, one branch of which follows close along the Pacific and the other along the Gulf coast of the country, holding up on these two arms the great table-land of the interior, thus affording every variety of production of the earth. The coffee-producing regions are found on the entire line of sea-slope of the mountains from Guatemala on the south, on the Pacific side, for more than a thousand miles to the north, until it reaches a line in the State of Sinaloa where

OCCASIONAL FROSTS ENDANGER THE CROP;

and also for more than a thousand miles on the Gulf coast from Yucatan into Tamaulipas. In addition to these immense stretches of country it flourishes in the numerous and fertile valleys of the interior, wherever the great table land is sufficiently depressed to reach the level of tropical and semi-tropical vegetation. The elevation above the sea at which it is thought coffee is most favorably grown is from 1,000 to 4,000 feet; but in Mexico it is cultivated with success at an elevation of 4,500 feet, and it is even found still higher. So also it is grown at lower levels than 1,000 feet, as in various places in Mexico it is produced at the very sea-side. Off the eastern coast of Yucatan, on the island of Cozumel, coffee trees of prolific yield are growing nearly at the sea-level as well as in many other localities on both the Pacific and Gulf coasts. So that it will be seen that the area for cultivation of coffee in Mexico is immense. The amount of its production, so far as natural capacity is concerned, need only be limited by the extent of land brought under cultivation. As already stated, the adaptability of Mexico as a coffee-producing country has been tested by

MORE THAN FIFTY YEARS OF EXPERIENCE

in its cultivation, which experience proves that in profit to the producer, as well as in quality of the article, this country has no superior. That it has not assumed the first place in exportation is to be attributed to other causes than the capacity of the soil, profit of the cultivation, or quality of the article—to the same causes which have retarded all commercial and agricultural development of the country. In 1818 and 1819 the profitableness of the growth of coffee in the West Indies led to the establishment of extensive plantations in the vicinity of Cordova and Orizaba, and in 1825 they were in a flourishing state. In the valleys of Cuernavaca and Cuautla, in the interior, in 1826, there were estates where there were growing as many as five hundred thousand plants.* And elsewhere in the republic much attention was given to coffee planting at that period, and great hopes were entertained that the country would soon be largely engaged in its exportation to foreign countries. But the civil disorders, which began soon after and which continued till lately, paralyzed all business enterprises, and disappointed these hopes; so that the coffee production of Mexico has been mostly limited to supplying the home demand, which is quite large as coffee is in very general use by all classes. During the past few years, up to the close of 1875, there have been peace and security in the country, and the cultivation of coffee has begun to increase, so that a small exportation has commenced. The statistics of the single port of Vera Cruz will show the growth of this exportation, which although insignificant as compared with the total production of the world, still indicates a very healthy development of this industry; it ought in a few years to become very considerable:

EXPORTATION OF COFFEE FROM VERA CRUZ.

Year ending June 30, 1871	672,588 lbs
Year ending June 30, 1872	1,942,220 lbs
Year ending June 30, 1873	3,909,446 lbs
Year ending June 30, 1874	4,204,446 lbs
Year ending June 30, 1875	5,373,678 lbs

The coffee exported from Vera Cruz is all grown in that State, with the valley of Cordova, on the Mexico and Vera Cruz Railway, as the chief center of its production. A brief reference to

THE METHODS OF ITS CULTIVATION AT CORDOVA

may be a matter of interest to the vast number of coffee-drinkers in the United States, many of whom know nothing of the article except at the daily breakfast table.† The seed or grain, which should be selected with care, is usually planted in well-prepared beds in a nursery, shaded from the sun. The young plants are transplanted at the age of one year or eighteen months to the fields or *cafetales*, which are thoroughly cleaned of all under-growth and the soil well prepared. As the young plants are very tender, it is necessary to protect them from the sun. For this reason open forests are used, where available, and the mountain sides affording shade are utilized for coffee plantations. In open fields a growing shade must be created, which is most quickly obtained by planting banana trees, also yielding some profit from their fruit. But the best cultivators at Cordova consider this a poor substitute. One of the most intelligent planters there has set out in his coffee fields a large number of cinchona trees (from which quinine is made), which grow well in that latitude; also valuable timber trees, as the oak, walnut, etc. The second year after planting there is a very slight yield of coffee; the third year about a half crop; and the fourth year (or when the plant is five years old) a full crop is gathered.

A REASONABLY RICH SOIL IS DESIRABLE FOR COFFEE,

and mauuring pays well in the vigor of the tree and increase of yield. The distance at which plants are set out in the field is usually about three yards (or varas) apart each way, although often planted closer. The cultivation consists in keeping the fields clean from weeds and undergrowth and plowing the soil. In certain localities irrigation is necessary, but in Cordova, after the plants are well started in the field this is not required, and the better class of planters give careful attention to pruning, keeping the plant or tree at the hight of from six to eight feet, although if unchecked it will grow to double that hight. The trees do not yield their full blossoming at one time. The first flowering is sometimes as early as December, the second about February, and the third and most abundant the last of March and the month of April. Early in April last it was my good fortune to spend several days in Cordova, in the midst of the blossoming season. The suburbs of the city in all directions are devoted to coffee cultivation. The lanes, lined on each side with *cafetales*, presented a most agreeable sight. The pure white blossoms, clinging close along the branches half covered with bright green leaves, gave the trees the appearance of being sprinkled with snow, and the perfume of the flowers, almost equal to that of orange blossoms, loaded the air with its fragrance. The flower falls, leaving a round green berry, which ripens in seven or eight months, changing when ripe into a red color. Each fully formed berry contains two grains, though sometimes it contains only one grain, which is sounded or oval-shaped, called by the Mexicans *caracolillo*. On account of the different times of flowering,

THE PICKING OR GATHERING SEASON

lasts for three or four months, each tree having to be carefully gone over three or four times by hand. This is the most tedious and difficult process of the whole cultivation. It cannot be postponed, must be done carefully, and requires an extra number of laborers, but women and children can be employed at low wages. The first process after picking is to dry the berries, which is done by exposing them to the sun, when they shrivel and change to a black color. They are then put into a mortar, and the grains hulled or beaten out with a pestle. The crude process of fanning it out by hand or winnowing, though sometimes a fan-mill is used. The coffee is afterwards picked over carefully, grain by grain, by hand, and selected, and it is then ready for sacking and the market. Up to the present the "doctoring" process of artificial coloring or bleaching, as in some countries, has been resorted to here.

THE PROCESS OF CURING

after gathering the crop, is in a most primitive state in Mexico. It presents a fertile field for Yankee ingenuity to invent instruments and methods to facilitate the process, or for enterprise to avail the inventions in use in other countries. And although it has been grown here for so many years, the coffee cultivation in Mexico may yet be considered in its infancy, as it is only beginning to receive the attention of intelligent and scientific cultivators, so that great improvements may be anticipated both in the cultivation and curing. Experience has, however, proved that it is

A CERTAIN AND RELIEBLE CROP.

So far its cultivation at Cordova has developed no disease of plant or berry. Insects do not attack it. It is very little affected by the climate, as in the locality of its production there is no frost; and although great drouth may diminish the crop, it does not destroy it. The flower, when in full bloom, is sometimes broken off by severe winds, but this seldom diminishes the yield. The crop is also clean and comparatively easy to cultivate. After the *cafetal* is once in full bloom the cultivation is easy. Only at the picking season is there much urgency required. Once gathered the crop can be

*American Grocer, September 26, 1875.

†New York Post, March 29, 1876.

*See Ward's Mexico, Book I.

†Hon. Martine Romero, well known in the United States as the former Mexican minister at Washington, has recently written a valuable work in Spanish, on coffee cultivation, entitled "Cultivo del cafe en la Costa Meridional de Chiapas."

cured and prepared for market leisurely and at the planter's convenience. The most prominent objection is that so much time is lost before a profit begins to be realized. If a planter commences with sowing the seed he must wait more than five years before he obtains returns upon his investment, or four years if he plants from the nursery, as the first year's crop barely pays more than the cost of cultivation and curing. But as compensation for this, a plantation once established yields a never-failing crop, without renewal, anxiety, or uncertainty for a lifetime.

THE PROFIT IN MEXICO

during the past few years has been about 100 per cent. over the cost of cultivation, and 10 per cent. interest on the capital invested. The period the trees will continue bearing as variously estimated is from twenty to twenty-five years. There are, however, trees now growing in Cordova sixty or seventy years old, remains of neglected and abandoned plantations, which by pruning and cultivation are yielding a fine crop. An intelligent American planter in that valley claims that with attention and care plants ought to continue bearing vigorously for fifty years. Another important feature of coffee-planting in Mexico is that the locality of its cultivation is usually both healthful and attractive—elevated above the fatal diseases of the tropics and in the presence of the most beautiful scenery. The valley of Cordova, for instance, is among the foot-hills of the great mountain of Orizaba, whose peak is covered with eternal snow, in a rich semi-tropical vegetation, and with a remarkably equable climate, the elevation being 3,000 feet above the sea.

THE AVERAGE YIELD PER TREE

at Cordova is estimated at about one and a half pounds, although it is claimed that with intelligent culture, pruning, and manuring, the average yield in that valley may be increased to three pounds per tree. It is not uncommon to find trees yielding from five to seven pounds, and in very exceptional cases, from twenty-five to fifty pounds each. With the trees planted nine yards apart each way, with the above-stated average, it is easy to estimate the yield per acre. It is unsafe to give a detailed calculation of the outlay required in establishing a plantation or *cafetal* up to the time of yielding the first paying crop, as much depends both upon the locality, and the intelligence and the economy of the planter, so that published estimates are apt to mislead. It may be stated, however, that after the plants begin to bear a full crop, the cost of annual cultivation is pto sale in local market, is from 6 to 7 cents a pound. It is very difficult to give any definite idea of

THE PRICE OF LAND IN THE COFFEE-GROWING REGIONS.

The average price, as per sales which have been made in the valley of Cordova beyond the vicinity of the city during the past two years, has been about $10 per acre, and at points out of the reach of the railroad, in the same State of Vera Cruz, sales have been made at $5 per acre, or even less. But this has been in a time of great business depression, and with a revival of commerce, and a growing demand for coffee lands, the price would very soon advance, possibly 50 or 100 per cent. In what has preceded I have referred particularly to the coffee region having the valley of Cordova for its center, for the reason that it is the locality at present of the greatest production in the republic, and is most accessible to the American market. But there are several other localities in the country where the cultivation is receiving considerable attention, and is assuming some importance in exportation. One of these localities is

THE DISTRICT OF SOCONUSCO,

in the State of Chiapas, immediately upon the borders of the republic of Guatemala. Hon. Matias Romero owns a plantation in that district, and the recent revival of this industry there is almost entirely due to his encouragement. Several Americans, and other foreigners, have located there, and are engaged in planting, and quite a number of the resident proprietors have embarked extensively in this cultivation. Among the special advantages presented in this district is the cheapness of land and labor. Public or Government lands, which are subject to entry by foreigners, can be taken at from $20 to $25 per *caballeria* (a Spanish measure of about 105 acres). Private lands have been sold at from $50 to $100 per *caballeria*, but native landowners here, as elsewhere in Mexico, have little disposition to part with their estates. Continued success in coffee-culture and a growing demand will materially increase the price. Wages are reported at 25 cents per hand per day; but, of course, this very low price could not be continued with a greatly increased demand for labor. The chief impediment to the development of this industry in Soconusco is the fact that this district is a disputed territory, claimed by both Mexico and Guatemala, and until this vexed question is settled, the tenure and protection of property will remain insecure. The valley of Urnapan, in the State of Michoacan, has great celebrity for its fertility, and for the superior quality of the coffee grown there. But the most noted region, especially for the excellence of its coffee, is

THE STATE OF COLIMA, ON THE PACIFIC COAST,

its products being so highly esteemed that it commands a fabulous price in the city of Mexico, and more distant places of the republic. The planting of coffee began in Colima, in 1858, to a very limited extent, with plants obtained from Costa Rico. The article produced was found so superior to any other grown in the country—sample lots sent to private parties in Europe being pronounced equal to Mocha—that in 1873 quite an impetus was given to the cultivation, and since that year over one million plants have been set out, which are now beginning to bear, and the planting continues to increase—coffee promising to become the principal article of export, and a fertile source of wealth to the State. The demand for all thus far produced is so great that it commands, in large lots, 27 cents per pound at the plantation, mainly for consumption in the interior, a small portion only being shipped to Germany by the resident German merchants on private orders. The American Consul at the city of Colima places the cost of land, suitable for coffee plantations, including water for irrigation, at from $15 to $30 per acre—depending on location and climate. He states that a plantation, containing 100,000 plants four years old (when the first crop is realized) costs from $10,000 to $14,000—the proceeds the first year being about 50,000 pounds, and from the fifth year onward 100,000 pounds or upward; and he estimates the average net yearly gain at $20,000. Colima and some other states have passed quite liberal laws for the encouragement of coffee cultivation, offering liberal premiums for the largest crops produced, and exempting coffee lands from all taxes. With peace in the country, and protection assured, this industry would offer

GREAT ATTRACTIONS FOR FOREIGN IMMIGRATION AND CAPITAL;

and for the Mexican farmer and landowner there is no more certain or profitable enterprise in which they can engage. To the common people, the poor, the Indian race, it presents the most desirable source of industry. It can be planted in small lots, garden plots or patches. It requires no costly machinery, like sugar, to prepare it for market. Women and children can attend to the greater part of the work. It is always reliable, and commands a ready sale, for cash, at good prices. It will be a happy augury for the country to see the lower and laboring classes more generally engaged in its production, as it will give them a permanent property interest for peace and against revolutions, and will be for them and the country a most fertile source of wealth. Mexico, for three centuries past, has been famous for its great production and exportation of silver But, in coffee alone, it possesses a far greater source of wealth and prosperity. Its natural capacity for its production is at least equal to that of Brazil, yet the value of the coffee annually exported from Brazil is more than three times as great as that of the silver and gold product of Mexico.

OVER-PRODUCTION VS. INABILITY TO CONSUME.

A Few Facts Worth Considering.

For many months, says the *Inter Ocean*, a persistent yet utterly false outcry has come from a portion of the press of the country, particularly from newspapers of free trade proclivities, that the long-continued disorganization of industry and trade is attributable to over-production. As proof, we are pointed to warehouses crowded with goods which cannot find purchasers; to manufacturing establishments running on part time, with a reduced force of working people; and to the multitude of laborers who cannot find employment. Still, we do not see how these facts support the argument, because the use made of them necessarily implies a direct and emphatic contradiction of a universally admitted postulate of political economy—of a fundamental proposition admitted equally by all the different schools of the science—that *production is the only source of wealth.* The allegation that we are growing poorer by producing too much is to us an insoluble paradox; for it sounds very much like a man claiming that he is involved in serious pecuniary embarrassments because he has cleared too much money. The greater the quantity of things produced in the United states, the greater must be the aggregate of wealth. When the results of the census of 1870 had been declared, the figures were received with pride and exultation, as showing signal progress in the accumulation of property through the activities of production, and as indicating a more rapid increase of wealth than in the previous decade, notwithstanding the vast waste and destruction of both values and lives during a protracted and great civil war. It now seems to be in order among a certain class of people to deplore such a movement of the productive forces, accelerated in pace, as a misfortune, and as the true source of the existing stagnation of business in this country. Such a position is extravagantly nonsensical. Nothing should be plainer than that over-production cannot take place so long as human wants for the things produced remain unsatisfied, and that each persons share in the general work of production supplies him with the means of gratifying his needs or his desires. Are the masses of our people to-day so fully furnished with these articles of convenience, comfort, or luxury of which it is said there is an over-production, that they feel no lack? Unless this be so, there must be under-consumption, not over-production. If there are hundreds of thousands of individuals who would like to own a piano, or a sewing machine, or a new suit of clothes, or what not, but cannot afford the purchase because they have lost employment and wages, or because the profits of business have fallen off, then the glut is only seeming, not real.

In 1872, when there was a great abundance of all things, very much greater than now, and production was exceedingly active, there was not any complaint of an overwhelming surplus. What is now the matter is under-consumption Some 2,000,000 men and women are compulsorily idle, who then were regularly employed. The earnings of these people amounted probably, as a total, to $5,000,000 a day, or to $1,600,000 a year. This purchasing power, vast in the aggregate, has disappeared from the marts of trade, depriving of a market a vast quantity of articles that otherwise would have been purchased and consumed. Production itself declines because of this expensive failure of demand. Restore the lost purchasing power, in the shape of wages paid for daily work, then what is unreasonably styled over-production would vanish. For a while, what would need to be termed under-production would supersede the so-called over-production. If all the idle laborers could be set at work, and kept at work, the industrial movement would soon get safely on its legs to stay there, and thrift with contentment would once more visit a stricken land. The rapid circulation of commodities, attainable only through steadily employed labor at good wages, constitutes the material prosperity of our national life. Meantime, enough things are not produced to satisfy the wants of the people. There are more mouths to be fed, more backs to be clothed, more feet to be shod, more heads to be sheltered, more bodies to be warmed, and more minds to be instructed, in 1876, than there were in 1872; yet the quantity of things produced is smaller. The over-production is apparent, not real—constructive, not actual—a ratio between production and the crippled power to consume, not between production and the urgent needs of consumers.

OVER-PRODUCTION OF BOYS.

The Napa *Register* makes the following hit:

The most common explanation of the prevailing hard times is, "over-production." The market is said to be glutted with goods, and the manufactories more numerous and of greater capacity than the demand warrants: which of course makes the investments unremunerative, and produces hard times, as a natural result. The vineyardists and orchardists of California are in a dilemma similar to the one which is vexing the Eastern manufacturers. They are producing more fruit than they can sell profitably, and the effect is unpleasant. The hoodlum nuisance is explained and in a measure excused, on the ground that there is not work enough for the boys to do, and hence they run at large, and give Satan a chance to find something for their idle hands to do. Now, if dull times and hard times have been caused by over-production, as so many assert, i would only make the times all the hard

er by setting the boys at work in manufactories and upon farms; and the correct way of stating the hoodlum case is not that there is too little work for the boys, but too many boys for the work—a clear case of "over-production" all around.

THE SQUIRREL LAW.

We give space to the entire bill providing for the extermination of squirrels, as it is a matter of interest to every farmer, whether residing in the counties included or not. The principle of the law is correct, and we hope it will be strictly enforced:

Section 1.—Squirrels infesting lands in Stanislaus, Santa Cruz, San Joaquin, Merced, Fresno, San Benito, Tulare, San Mateo, Santa Clara, Monterey and Kern Counties, are hereby declared a public nuisance.

Sec. 2.—It shall be the duty of every person owning, claiming or occupying land within three miles of any cultivated field situate in those counties, to keep the land so owned, claimed or occupied, clear of squirrels, and to destroy in such duty shall be entitled a sufficient cause for the public, through its authorized agents, to enter upon such land and abate the nuisance by destroying the squirrels thereon as in this Act provided; and all costs and expenses incurred, as in this Act provided, are hereby declared a lien upon and against all the lands so owned, claimed or occupied, upon which said expenses are incurred, and such lien shall not be removed until payment or sale has been made to satisfy such costs and expense

Sec. 3.—The Board of Supervisors may, in their discretion, create Squirrel Inspection Districts, composed of one or more School Districts, and may, in their discretion, appoint one suitable person in each of the said districts, not exceeding in Squirrel Inspector. Said Board shall be governed, as far as practicable, by the recommendation of the trustees of the district in making such appointments by the recommendation of the land owners, claimants and occupants of land in said districts. The appointee shall qualify with the usual oath of office and such bond as the Board of Supervisors may require, and hold office at the pleasure of the said Board of Supervisors. The Board of Supervisors may fill any vacancy that may occur from any cause in the said office, and the said inspector shall be held responsible to the owners or occupants for any unreasonable or unnecessary damage that may occur in carrying upon lands for the purpose of destroying squirrels.

Sec. 4.—Each of said inspectors shall be entitled to compensation at the rate of $3 per day for actual service, to be paid as hereinafter provided.

Sec. 5.—Each squirrel district inspector provided for by this Act shall upon request of any land owner give needful instruction in the use of poison, or implements for the destruction of squirrels, to land owners, claimants and occupants of land in his district.

Sec. 6.—On the first Monday of October in each year, unless some other day is fixed by the order of the Board of Supervisors, the land owners, claimants and occupants of land in each squirrel inspection district provided for by this Act, shall commence destroying the squirrels on all their lands infested by squirrels, and shall faithfully and continuously prosecute such work until the squirrels are destroyed.

Sec. 7.—When there has been a refusal or neglect for two weeks by any land owner, claimant or occupant of land to destroy the squirrels thereon as provided for by this Act, to comply with the provisions of the last preceding section of this Act, the inspector of said district shall enter upon such unenclosed land and proceed at once to destroy the squirrels on such neglected lands, and shall cause to be filed in lieu of such intention in the Recorder's office of the county, designating the name of the delinquent owner, if known, and the land by number, or other description sufficient for its identification, shall serve notice in writing upon the occupant of the land of having filed such notice of intention, and shall keep an exact account of all expenses, including his own per diem, incurred upon such neglected lands, as owned, claimed or occupied, separately, and together with the description of the land as above provided, file the same with the Recorder, provided, however, that separate pieces or tracts of land shall belong to the same owner, may be included in one notice or description of tracts and be included in the same filing, which shall be done on the completion of the work; and provided, that the owner, claimant or occupant may exempt himself to the inspector at any time before the filing of such account by paying all costs and expenses of said expenses. The said inspector in such case will omit the filing and pay himself and employees for the work done and for the poison, and cancel the notice of lien after the filing of the aforesaid accounts and description of land, the County Recorder shall add ten per cent. of such costs, and shall proceed immediately to record the same in a book to be by him kept for that purpose. The said record shall be deemed to impart constructive notice of the aforesaid lien to all persons, and shall be deemed to relate to the time of filing the notice of intention as herein provided.

Sec. 8.—On the first Monday of October in each year the inspectors shall each employ all needful help and means, and proceed to destroy the squirrels upon unoccupied public lands in his district, within three miles of any cultivated field, and shall proceed immediately to record the same in a book to be by him kept for that purpose. The said record shall be deemed to impart constructive notice of the aforesaid lien to all persons, and shall be deemed to relate to the time of filing the notice of intention as herein provided.

Sec. 9.—On the first Monday of October in each year the inspectors shall each employ all needful help and means, and proceed to destroy the squirrels upon unoccupied public lands in his district, within three miles of any cultivated field, and shall proceed immediately to record the same in a book to be by him kept for that purpose. The said record shall be deemed to impart constructive notice of the aforesaid lien to all persons, and shall be deemed to relate to the time of filing the notice of intention as herein provided.

Sec. 10.—Each and every person owning, claiming or occupying lands in any squirrel inspection district, who refuses or neglects to comply with the requirements of this Act, is hereby held liable for, and declared to be indebted to the county in which the said squirrel inspection district is situated, to the amount of the actual expenses incurred by the inspector in destroying squirrels upon such land, as shown by the account of said inspector filed with the County Recorder, where payment may be made to such Recorder, at any time within ninety days after the filing of such account, together with the accrued costs. When payment is made to the Recorder aforesaid, he shall give his receipt for the same, and enter note of the same in the margin of the record of the satisfaction of the lien, which shall release and discharge the lien upon such lands.

Sec. 11.—When the account of any inspector has been on file with the County Recorder ninety days and the said Recorder shall pass the account over to the District Attorney, and the District Attorney shall add 15 per cent to the account for attorney's fees, and then he shall bring suit in the name of the people of the State of California, in the proper Court, to recover the amount of the account and percentage. He may bring as many actions, either to foreclose the lien or against the party owning the premises, as may be necessary to enforce the claim. Service of summons in all suits to be brought in the name of the civil actions; provided, that when there is more than one cause of action against the same party they shall all be embraced in one suit; any provision further, that when it becomes necessary to make service by publication, the Board of Supervisors may designate the owners or publishers of all newspapers in the county of their intention to publish said summons, and award the publication to which has bidder.

Sec. 12.—The proceedings in sale and redemption of property to satisfy liens under the provisions of this Act shall be as prescribed by Sections 3770, 3777, 3778, 3779, 3780, 3781, 3782, 3783, 3784, 3785 and 3786 of the Political Code, for the collection of delinquent taxes, so far as the provisions of said laws are applicable and not in conflict with the provisions of this Act.

Sec. 13. The defendant, in answer to suit, may plead, first, that he did not claim, own or occupy the land on which the squirrels were destroyed.

Sec. 14. It is hereby required of any land owner, claimant or occupant of land upon which the aforesaid inspector has commenced destroying squirrels, to assist said inspector therein, as required, and when such owner, claimant or occupant is destroying squirrels or trapping squirrels upon his land, he shall be in the employ of said inspector, and it is further required of such land owner, claimant or occupant, when he knows of squirrels upon land not his own, owned, claimed or occupied prior to aforesaid first day of April, to notify the inspector of the same.

Sec. 15. Provides that the Board of Supervisors, at the time of levying other county taxes, shall levy a tax sufficient for the requirements of this Act; provided, that such tax shall not exceed twenty-five cents on each one hundred dollars' worth of taxable property in the county which tax shall be assessed and collected as other county taxes, and paid into the county treasury, to the credit of the Squirrel Nuisance Abatement Fund, which is hereby created.

Sec. 16. The County Recorder and District Attorney shall each pay over all the money received by either of them, as compensation for the services of this Act, to the County Treasurer, to the credit of the Squirrel Nuisance Abatement Fund, which is herein provided.

Sec. 17.—All employees of the inspector provided for by this Act shall be entitled to compensation, which shall not exceed $3 per day for actual service; and when not paid by the inspector shall be paid as herein provided for.

Sec. 18. All the expenses incurred in carrying on the provisions of this Act, when not settled for by the land owners, claimants or occupants, shall be paid from the Squirrel Nuisance Abatement Fund provided for by this Act. Warrants drawing 7 per cent. per annum interest, shall be issued by order of the Board of Supervisors on all approved claims thereon, payable by the treasurer from the said fund.

Sec. 19.—Each squirrel inspector shall at first render a detailed account, under oath, to the Board of Supervisors for all the money he receives of land owners, claimants and occupants, for the purposes of provisions of this Act; and he shall present all claims for himself and employees, verified, to the Board of Supervisors.

Sec. 20.—The owner of any land, or any party claiming an interest or right in the premises of San Joaquin, Stanislaus, Santa Cruz, Merced, Fresno, San Benito, Tulare, San Mateo, Santa Clara, Monterey and Kern, shall have the right to enter upon the same for the purpose of destroying squirrels, in case the lessee or other occupant shall neglect to destroy them; and parties so entering shall be responsible for any unreasonable or unnecessary damages to the premises or crops from such entry and no entry on lands for the real or nominal purpose of destroying squirrels thereon shall be deemed or held to establish or give color of claim to the property, except as herein provided, nor is any authority herein given of entry upon lands for other purposes than inspection and destruction of squirrels, as in this Act provided.

Sec. 21.—All Acts or parts of Acts in conflict with this Act are hereby repealed.

Sec. 22.—This Act shall take effect immediately

A very fat animal is never fit for successful breeding, and on well known physiological principles, a very fat ram, as a general thing, does not get as good lambs as a ram in just good condition, who has had ample exercise and enough feed—that is, and bounding with health and elasticity.

THE GAME LAW.

When Fish May be Taken and Game Killed Under Present Regulations.

As the game season approaches, much interest is felt by sportsman to learn the changes in the laws with regard to killing game that were effected by the last Legislature. The new sporting journal, the *Pacific Life*, gives the following synopsis of the laws on this subject as they now stand, which will no doubt be found to be correct:

The close season for salmon commenced August 1st, and extends to November 1st. Under the law passed at the last session of the Legislature it is made a misdemeanor to catch, transport or have in possession fresh salmon during this period. The penalty for a violation of the law is from $50 to $200, and this is divided between the informer, the prosecuting attorney and the school fund of the county

Every person who, between the 1st day of January and the 1st day of September of each year, takes, kills or destroys any elk, deer, mountain sheep, or antelope, is guilty of a misdemeanor; and every person who shall take, kill or destroy any of the animals herein mentioned, at any time, unless the carcass of such animal is used or preserved by the person slaying it, or is sold for food, is guilty of a misdemeanor. Any person catching or having in his possession, or offering for sale, shad, at any time prior to the first Monday of December, 1877, is guilty of a misdemeanor. The following counties are excepted from the provisions of this section: Del Norte, Humboldt, Shasta and Mendocino.

Section 626 of the Penal Code was amended last winter to read as follows: Every person who, in the counties of San Bernardino or Los Angeles, between the first day of April of any year and the first day of August of the same year, or who in any other of the counties of this State, excepting the counties of Lassen, Plumas, and Sierra, between the 15th day of March and the 15th day of September in each year, takes, kills or destroys quail, partridge, or grouse, mallard, or wood duck, species of any kind of broad bill ducks, is guilty of a misdemeanor.

Sec. 631.—Every person who, between the 15th day of October and the 15th day of the 1st day of April in the following year, takes or catches any trout is guilty of a misdemeanor.

Sec. 632. Every person who, in the counties of Alpine, Santa Clara, Santa Cruz, Lake, San Mateo, Monterey, Sonoma, Tuolumne, Alameda, Marin, Nevada, Placer, Plumas, Sierra, San Luis Obispo, Solano, Mariposa, Mendocino, or Napa, at any time, takes or catches any trout except with hook and line is guilty of a misdemeanor.

Sec. 633.—Every person who takes, catches or kills any trout by the use of nets, weirs, baskets, or traps, is guilty of a misdemeanor.

The penalty for the violation of the law is as follows:

Except in cases where a different punishment is prescribed by the Code, every offence declared to be a misdemeanor is punishable by imprisonment in a county jail not exceeding six months, or by a fine not exceeding $500, or both.

The Board of Supervisors of Santa Cruz county, at their meeting on the first Monday in August, changed the deer law so that hunters may kill deer from the 15th of August to the 1st of January, instead of (as heretofore) from the 1st of September to the 1st of January.

WITHOUT an agricultural paper, the former is confined chiefly to his own limited experience. He cannot profit by the experience of the world at large, for he knows not what is going on in his own profession, even.

A good agricultural paper may be compared to a sea that gathers waters from a thousand tributaries. So an agricultural paper gathers knowledge, experience, wisdom, from hundreds of intelligent, practical correspondents, and from other agricultural papers, and thus furnishes an exhaustless store of information to the farmer. Hence, every farmer who follows farming for a livelihood, ought to take an agricultural paper, that he may avail himself of the valued experience it contains of others in his own profession.

The centennial anniversary of our national birth and that of the first settlement made on the Bay of San Francisco occur in conjunction. On the 9th day of October, 1776, was founded the Mission of San Francisco de los Dolores, the determining point of our present young and prosperous city. To the resident of San Francisco, therefore, this pleasant coincidence imparts to this Centennial year and great Paschal Day an additional interest, since but for the humble event above alluded to the emporium of the Pacific coast might have occupied another site on our glorious bay than the little cove of Yerba Buena.

Platform of the Independent Party.

As political platforms are pooled reading just now, and we have not seen the Independent one in any paper on this Coast, we insert this as information on an important subject:

The Independent Party is called into existence by the necessities of the people whose industries are prostrated, whose labor is deprived of its just reward as the result of the serious mismanagement of the national finances, which errors both the Republican and Democratic parties neglect to correct. And in view of the failure of these parties to furnish relief to the depressed industries of the country, thereby disappointing the just hopes and expectations of a suffering people, we declare our principles and invite all independent and patriotic men to join our ranks in this movement for financial reform and industrial emancipation.

First—We demand the immediate and unconditional repeal of the specie resumption act of January 14, 1875, and the rescue of our industries from the ruin and disaster resulting from its enforcement, and we call upon all patriotic men to organize in every Congressional district of the country, with the view of electing representatives to Congress who will carry out the wishes of the people in this regard, and stop the present suicidal and destructive policy of contraction.

Second—We believe that the United States note issued directly by the Government and convertible on demand into United States obligations, bearing an equitable rate of interest, not exceeding one cent a day on each one hundred dollars, and interchangeable with United States notes at par will afford the best circulating medium ever devised; such United States notes should be a full legal tender for all purposes, except for the payment of such obligations as are by existing contracts expressly made payable in coin. And we hold that it is the duty of the Government to provide such a circulating medium, and insist, in the language of Thomas Jefferson, "that bank paper must be suppressed and the circulation restored to the nation, to which it belongs."

Third—It is the paramount duty of the Government in all its legislation to keep in view the full development of all legitimate business, agricultural, mining, manufacturing and commercial.

Fourth—We most earnestly protest against any further issue of gold bonds, for sale in foreign markets, by which we would be made for a long period, heavers of coal and drawers of water for foreign nations, especially as the American people would gladly and promptly take at par all the bonds the Government may need to sell, provided they are made payable at the option of the holder and bearing interest at three and sixty-five one-hundredths per cent. per annum, or a lower rate.

Fifth—We further protest against the sale of Government bonds for the purpose of purchasing silver to be used as a substitute for our more convenient and less fluctuating fractional currency, which, although well calculated to enrich the owners of silver mines, yet in operation will still further oppress in taxation an already over-burdened people.

The large amount of American cheese of superior quality now sold thereon, from Great Britain is causing considerable uneasiness in the minds of English manufacturers.

The Horse.

Walking Horses.

WE are glad to notice that many of our Western fairs are offering handsome premiums for the fastest walking horses. There is no disguising the fact that a good walk is the most useful gait that a general purpose horse can possess; and if one-half the attention were paid to cultivating this gait, and breeding with a view to its transmission, that is now given to that of training and breeding trotters, horses that could walk five miles an hour would soon be as abundant as 2:30 trotters now are. The trouble now is that the whole country is possessed of a mania for fast trotters, and as soon as the colt is broke to halter, no matter whether he be thoroughbred, Conestoga, Norman, Clydesdale, Hambletonian, or Canadian, he is put to trotting. The whole country is engaged in training trotters, from the plowboy in the field to the professional on the track, to the utter neglect of that more useful, every-day gait, the walk. Even the importers of draught stallions from Europe have caught the infection, and, instead of bringing the best walkers, we only hear of their "great trotting action." It is time to put an end to this nonsense; the gait for a draught horse is pre-eminently a walk, while nothing adds more to the ability of the roadster to make a long journey in good time than a walking gait that will carry him along at the rate of five miles an hour.

The first aim, when a colt is broken to the harness, should be to educate him to a good, fast walk, and after that has been done, if you can get him to trot fast, so much the better. One of the most successful breeders of trotting horses in America has often remarked to us that he would not keep a horse on his place that was not a fast walker, and that he had invariably found that the fastest walkers made the fastest trotters. It is a positive luxury to ride or drive a horse that can walk off with you at the rate of five miles an hour. It is such a relief to feel that when you ease up your horse from his swinging trot, or lope, that you have not come to a stand-still, but that you are yet making remarkable progress. For our own private use on the road, the walk is the gait which we prize above all others, and anything which promises to increase the number of fast walkers will receive our hearty encouragement.—*Spirit of the Times.*

ARAB HORSES.—The article on Arabia in the second volume of the new edition of the "Encyclopedia Britannica" is by William Palgrave, one of the first authorities upon the subject. A good portion of his article is given to that theme of never-failing wonder, the Arab horse. He says:

Reared under an open shed, and early habituated to the sight of man, to the sound and glitter of weapons and to all the accessories of human life, the colt grows up free from vice or timidity, and even acquires a degree of intelligence that surprises a stranger. Barley and dates are the chief stall provender; but the grass of the pasture grounds, in the selection of which much care is taken, is the ordinary nourishment of an Arabian horse. Of water the allowance is always kept purposely scant. A good Nejdee will canter four-and-twenty hours in summer time and eight-and-forty in the winter without once requiring a drink. Raw meat, dried, is occasionally given in small quantities when extra exertion is required; lucerne grass is employed for lowering the tone. Geldings are very rare. The color which most frequently occurs is gray; then comes chestnut; then white and sorrel; mottled gray and black are now and then to be found; dark bay never.

Colts are ridden early—too early, indeed—in their third, or even second year, and are soon broken into a steady walk or canter, and to the ambling pace which is a special favorite with Arab riders. Racing, an Arab amusement from time immemorial, and the game of "jerzed," a kind of tournament, or mock fight with blunt palm sticks, highly popular without the peninsula, complete the training as to wind and pace.

Saddles are seldom used in Nejd, and stirrups never; but both are occasionally employed in Hijaz and Yemen. So it is, also, with bits, the place of which is taken in Nejd by halter ropes, the real guidance of the animal being almost wholly effected by the pressure of the rider's leg and knee. Shoes, too, are of rare occurrence, nor are they needed in the light sand-mixed soil of the central provinces; on the other hand, the hoofs are often rubbed with grease to counteract the drying effects of the heated ground.

Of all niceties of grooming, docking and clipping excepted, the Arabs are masters; and their natural kindness to animals—a quality which they share with most Orientals, together with the care every reasonable man bestows on a valuable article of property—insure to an Arab horse good treatment, at the hand of its owner. But Arab horses do not commonly enter tents, nor play with the women and children, nor, in a general way, do they share the family meals, nor are they habitually kissed and cried over, as the imagination or credulity of some narrator has suggested. An Arab flying for life has, indeed, been known to give the only morsel of bread about him to his horse rather than eat it himself—an act in which self-preservation had as large a share as affection. Lastly, the standing prohibition of horse selling from Nejd has really nothing more romantic in it than unreasonably unlimited application of the principles of protective monopoly; in other cases, reluctance to conclude a bargain simply indicates that the offer made was insufficient.

THE ORLOFFS OF RUSSIA.—A recent traveler describes them as driven in shafts, often between two running mates, at the top of their speed, for miles, and rarely or never breaking their square, quick trot. Thoroughbred horses, English hunters or Arabians, are used for their mates, and we can judge very well that there must be a speed obtained which would be judged respectable even on our fashionable trotting courses. This breed is the result of discreet breeding of a single man, Count Orloff. It has a reputation of being composed of a large supply of the best Oriental (chiefly Arabian) blood, mingled with that of some English, and more of the best trotting stock of Europe, (Russia, Germany and Denmark.)

It seems probable that we shall not see American trotters established as a uniform breed, until some one, or some company of breeders, systematically diffuse (not cross) thoroughbred blood of some sort, either English or Arabian, through that of a well selected group of mares of our most famous trotting families. It is a work of years, and fixed results would hardly be expected before the third or fourth generation.

I have been led without thinking into this discussion of the subject of breeding trotters, when I intended merely to contrast the breeding of draft horses with that of trotters, and to impress the fact that the trotting horse is generally a heavy bill of expense to his breeder, and a disappointment when sold, while first class draft and express horses, and stylish carriage horses may be bred with a certainty of reward, which is always the highest satisfaction to the breeder.

I may here mention an interesting fact which came recently under my observation while abroad, and that is, that the Russians are using the established breed of Count Orloff to develop sub-races or branches of the breed. Among these is the Orloff carriage horse. Those which I saw were superb 15⅞-hand stallions, coal black, light-limbed, upheaded, level, and powerfully muscled, with high, stylish action, and reputed to be very honest trotters. What a boon it would be to this country to have such a breed!—*Cor. Am. Agriculturist.*

PERCHERON HORSES.—These horses do not originate exclusively in Perche, as believed by many; in fact, this province is rather devoted to raising horses than to breeding them. The intelligent farmers of that section buy horses old enough to work, bred in Vendee, Poitou, Bretagne, Normandie, Picardie, Artois, and even in Champagne, Nivernais, Bourgogne and Franche-Comte. These are selected with good judgment from all the principal races of French horses, being the best specimens, their color, form and style must correspond with what is known as the Percheron horse. They are well fed for one or two years, and are thus modified, *Percheus*, by the large amount of oats fed by these farmers. They derive their good qualities less from their ancestors than from the oat sack (Magne). This idea may be a useful hint to some American breeders who have been dissatisfied with the results of breeding to Percheron stallions. It may also be interesting to know that the prestige of the gray color is losing ground, and that there is now a movement among the breeders to produce Percherons of a bay or other dark color.

CLYDE HORSES.—The London *Field* says that Clydesdale breeding in Scotland has grown in popularity, and is apparently increasing. The Clydesdale is admittedly the best sire for a farm stud. The great rise in the price of horses has stimulated farmers in breeding, and the encouragement given to this valuable breed of horses by the Glasgow Agricultural Society has aided in the improvement of the Scotch farm horses. The best animals in the country are annually attracted to the Glasgow meeting, and there the agricultural clubs throughout the country have facilities for selecting worthy sires, which are nowhere else obtainable.

REMEDY FOR WORMS.—A correspondent of the Maine *Farmer* gives this remedy for curing worms in horses: I have found linseed meal the best thing I ever used. Give from a pint to a quart for a few days, then a less quantity will do. I usually give this in shorts, meal or oats mixed with boiling water, and a little salt put in every day. In some cases a few doses of sour apples, without anything else, will remove worms. I like remedies that are easily given. The meal is a good feed for horses in small quantities, if they are not troubled with worms.

CURE FOR SCRATCHES.—Take a piece of buestone the size of a large kernel of wheat; dissolve in one-half teacup of hot water; when cool, apply with a swab two or three times a day; the parts to be washed clean and wiped dry first.

WORMS.—A horse is not inconvenienced by worms while in a state of health; they are the result of indigestion. The object to be accomplished is to give the digestive organs a healthy tone. When, from an unhealthy condition of the digestive organs, worms have gathered in the intestinal canal, give bitter tonics and alteratives, which are obnoxious to them; they then die and pass off as fecal matter. Give powdered poplar bark, powdered sulphur and powdered salt, in equal parts. Dose, one tablespoonful, in bran or other feed.

Pisciculture.

Conveyance of Live Fish.

WE are beginning to learn that up to a certain point, the value of water for non-lung-breathing aquatic animals does not so much depend on its amount as upon its distribution in such a manner that it shall absorb the greatest quantity of atmospheric air, or rather of the oxygen which enters into the composition of that air, leaving much of the nitrogen out unabsorbed. The earliest observer known to me of this fact was the late Dr. R. Ball, who, in Bell's *British Crustacea*, records how much better he kept a crayfish (Astacus) in a shallow vessel than in a deep one. In all my aquarium work I keep this law in view, and I regulate the amount of surface of water exposed to air, as well as the actual quantity of water, according to the known requirements of the animals to be kept; and the result is very surprising both on the health of the creatures and in the saving of the maintaining aquaria.

I also apply the rule to the conveyance of aquarium animals. To give an actual example, I find that the following animals and some others may, at certain temperatures, be safely sent from Southend, in Essex, to the Crystal Palace in boxes (or preferably in baskets) packed in damp, freshly gathered sea-weed: 1, nearly all the sea anemones; 2, most of the Nudibranchiata; 3, a large number of Annalids; 4, many Crustacea; 5, some of the Tunicata; 6, nearly all shelled Mollusca, both univalves and bivalves, and some of the Nudibranchiata; the following fishes: Anaplexus (this once came alive from Naples in a post letter, and four of them so brought are still alive in the Crystal Palace aquarium), plaice, soles, brill, rocklinhs, eels, gobies, blennies (of three species), sea scorpions.

The explanation of the reason why they so travel is this: They are surrounded with moisture in a sufficient degree to enable respiration to be carried on. Take, for example, any fish so conveyed. It is not immersed in water, but its gills are kept wet by such very thin films of water that their thinness, otherwise shallowness enables them to be instantly oxygenated by contact with the atmospheric air, which enters the apertures of the containing box or basket, and which permeates the entire mass, and therefore the gill filaments are kept wet and separate from one another, and the blood uninterruptedly flows through them, and is aerated as it does so, oxygen being absorbed from the perfectly aerated water, which thus does double duty in a measure. I admit that the balance thus maintained is a delicate one, and is easily disturbed by external causes. Thus, a heated atmosphere would cause the moisture to evaporate and the gills to dry up, and the fish or other creature would soon die. So also great cold would freeze the gills into a temporarily

dry mass, and death would likely ensue. But there is one thing which I do not yet understand, and which I should be very grateful to have explained. It is this, that while many of the creatures I have named will bear the four hours' journey from Southend, some of them will not bear the twelve hours' transit from Plymouth, though equal care be apparently taken with the packing in both cases. But when such packing is possible the gain is enormous in everything. We often at the Palace get a couple of thousand of animals, or more, in packages weighing not altogether half a hundred weight, while if the same animals needed to be conveyed in properly aerated vessels of actual water, such creatures would require a pound weight of water instead of only a fraction of a grain weight to each. The money value of the moist plan is strikingly shown in the instance of shrimps, of which we use about a ton weight every year at the Crystal Place Aquarium, for feeding purposes; and we require them alive, because many animals refuse to eat them when dead. They cost us in good condition about a shilling a quart; but if it was necessary to bring them alive in water, they would cost at least a guinea a quart.—*W. A. Lloyd in London Zoologist.*

How the Indians Fish for Salmon.—While on the head-waters of the Sacramento river last year I had several opportunities of seeing the Indians catch the salmon, which serves them for food during the winter, and, in fact, during the whole year. The Indians, not being subject to the prohibition of the game laws, are allowed to take game at any season of the year, and they take the salmon when they are in the river to spawn, at which time they come in in immense numbers. The Indians take them by means of spears, one of which I measured and found it only a few inches short of twenty-five feet in length, and the *modus operandi* is as follows:

The Sacramento near its head is very swift, and in its passage across different ledges of various degrees of softness it excavates large pools or holes in its bed, each having a small fall at the head, and a rapid beyond. The water in these holes, which are often very large, is comparatively still, and they make welcome resting places for the tired salmon before they attempt the passage of the rapid above; they collect in them in great numbers, the water is beautifully cold and clear, and the fish can be seen crowded together on the bottom. The Indians repair to one of these holes to the number of twenty or more, and a fine picture they make as they stand in position to strike when the word is given, nearly naked, with their brown skin shining, and eyes glittering in anticipation of the sport. Some station themselves at the rapids above and below the hole, others wade out to an isolated rock, or a log projecting into the stream. All hold their spears in readiness, and at a grunt from the leader they commence business.

At the first onslaught all generally manage to secure a fish, which is detached from the spear and thrown on the bank, the spears, by the way, having barbs of steel, which become detached from the stock when they enter the fish, and being attached to the shaft by cords, turn flat against the fish's side, and make escape impossible when the salmon is pierced through. The Indians proceed silently with their work, and secure a great many fish before they escape from the hole. Sometimes three or four hundred are thus speared out of one pool.

They are very cautious about making their preparations so as not to frighten the fish till all are ready, and then to confuse them by a sudden onslaught. The fish are split open and dried in the sun on the bushes, which present a curious appearance, all hung with the bright red flesh; they are then slightly smoked and reduced to small flakes, and laid away for future use. The roes also of "mahalies," as they call the females, are carefully saved and dried, and are considered a great delicacy by the Indians; but I never heard of white men eating them, although I should think that if cooked while fresh, they would be quite palatable.

The trout fishing of this region was also said by some English lords who were fishing there to be superior to anything they had ever seen, each fly on a flight of six being taken in one lake as soon as they touched the water; and these are not lake trout, mind you, but brook trout, or rather river trout, which enter the lake through a stream connected with the river. The Dolly Varden trout, as it is called on account of the large red spots along its sides, is also found in no other stream. This fish has until lately been unknown to all but the old hunters of the region, and is certainly the gamest fish I ever saw, salmon not excepted. It weighs from four to eight pounds, and when hooked takes the hook between its teeth, like a horse seizing the bit, and makes a rush of sometimes eighty yards in a straight course, continuing these spurts until exhausted. They seem to be of large size, and are inclined to be cannibalistic.—*Forest and Stream.*

Fish Culture in France.—The French Legislature has decided that fish culture shall form a part of the programme of all farm schools. This was a branch of rural industry formerly much cultivated in this country, especially in reference to carp, which is a most prolific and easily propagated fish. Weight for weight, it fetches nearly as high a price as beef, and no farm stock can manufacture flesh so rapidly as carp. Any pool of water can raise the fry; at two years of age, they must be transferred to larger spaces of water, and even then, can command at the rates of 200 fr. per 1000 head.

There is a pisciultural society in Monterey county which is alive and working to introduce into the waters of that county a stock of all the best varieties of fish. Their example could be followed by many other districts with profit.

Apiary.

Bee-Keeping in Los Angeles.

As a specimen of what has and can be done by some of the leading apiarists of this county, we give the following figures of the amount of honey produced the present season by Harmon, Loop & May, at their ranch near San Fernando station. On the first of April this firm had 140 stands of bees and up to the 15th of this month had extracted some 50,000 pounds of honey of superior quality, and are still getting some honey of a poorer grade, of which the amount will probably reach 10,000 pounds, making a total for the season, or since April last, of 60,000 pounds. Of this amount, 10,000 pounds has been shipped to Chicago, a small quantity to San Francisco, and two or three thousand pounds sold in this city. The firm now have 20,000 pounds in the depot at San Fernando, with which they intend to load the first car through from Los Angeles to Chicago. They also expect to ship the remainder of their crop to Chicago, where they have established an ahency for the sale of it at wholesale to dealers in that vicinity. The honey is mostly put up in cans containing about seven pounds, and packed in cases containing eight or twelve cans each, which makes it in convenient shape for the retail trade. In addition to the honey produced this season, they have increased their 140 stands of bees to 450, and have transformed a wild, desolate patch of greecewood and sage brush to one of the most delightful places of residence in the county, being nearly 2,000 feet above the ocean, overlooking the Coast Range of mountains, accessible by the best of roads, and within three miles of San Fernando. It is stated, on good authority, that the annual product of honey in this county is over 1,500,000 pounds, which has a market value of $150,000. Of course, this does not include the thousands of pounds of wax produced, selling at twenty cents per pound, which would greatly increase the figures.—*Weekly Mirror, Aug.* 26.

Comb Foundation.—"What is comb foundation?" The following, from the *American Bee Journal* for May is an explicit answer:

Take a piece of empty honey comb and cut off all the cells, until nothing is left but the division wall of wax between the two opposite sets of cells, and you have a comb foundation. The latest production, however, consists not merely of the dividing wall, but also a slight depth of the cell-walls themselves, on each side, and these cell-walls, although slight in depth, may be of such thickness as to contain enough wax, so that the bees may work out or prolong the cells to their full depth without any additional material.

These come foundations are given to the bees in their brood chamber, enough being put in a frame to fill it, in whole or in part, perhaps only a narrow strip being used for the bees to start upon. They are also used for surplus honey, enough being given to fill the boxes, or merely enough to give the bees a start. The object is to save the time of the bees in secreting the wax, as also the honey used in its production. Another object is to secure all straight, worker comb, and still another to hasten the commencement of work in boxes when the bees are loth to enter them.

Thus much by way of answer to those who are asking: "What is comb foundation, and what is it for?"

Parasites on Bees.—The *Rural World* reports that at the last meeting of the St. Louis Academy of Sciences, Prof. C. V. Riley, the President, read a communication from G. W. Barnes, of San Diego, Cal., in relation to parasites upon bees in that State. The parasite was described as of the color of a flaxseed and easily distinguished by the naked eye. It appears usually under the wing of the bee, and adheres with considerable tenacity. It occasionally crawls all over the bee, and is quite agile in its movements. The bees afflicted with the vermin become agitated and move rapidly over the comb, frequently dying of injuries. The parasites were first noticed there last year, and have again appeared this season, giving considerable trouble in large apiaries. Specimens of the insects afflicted accompanied the letter, and Prof. Riley said the parasite was the larva of the blister beetle. It was well known that these larvæ attached themselves to bees and were thus carried into the hive, where they usually left the grown bee and attacked the larvæ. Prof. Riley had not before heard that these insects injured the fully developed bees. The information was valuable, if reliable.—*Rural New-Yorker.*

Bees Stinging.—For fifteen years I kept bees in my garden at 6 Lordship Terrace, Stoke Newington, the hives being literally shut in on three sides by houses; and in that time I never heard a complaint of any one ever having been hurt, or alarmed or threatened.

The bee, like man, is a creature of habit. When thoroughly accustomed to human society, the industrious insect plods on in the most peaceable and lawabiding manner; hence, while a town bee may be interrupted with impunity, a country bee is apt to sting when seriously interfered with, especially when checked in the prosecution of daily duty. During the fifteen years my bees saw much of society, they were remarkably docile and manageable, and I could catch them on the wing, retain them in my hands, and after some seconds liberate them, to see them dart like an arrow to the hive, and I was never stung by the prisoners. But when I planted my bee shed in a lonely spot, and the only saw open meadow, they soon became so far savage that I could no longer handle them safely.—*Shirley Hibbard in London Times.*

Subduing Bees.—The stings of bees were given them for the protection of their stores. They are not disposed to sting when not in danger, and every bee which does sting dies. Away from their own hive they rarely make an attack. The natural dread of stings deters many from keeping bees who would be glad to do so. In the use of modern hives, the danger of being stung is lessened, as these give you facilities for subduing them. A bee with its honey sac full never stings. When you alarm a colony of bees, they all instinctively at once fill their sacs with honey, and after time has been allowed them to do this, their hive can be opened and examined with no danger from their anger.—*Mrs. Tupper.*

Porcine.

TRICHINOSIS.

An Important Subject.

A FEW years ago, says the *Country Gentleman*, no one would have known the meaning of this term—save some technical scientist—certainly no farmer, because we are just beginning to realize that it means a horrible disease. It certainly is to be wished that our learned friends would not frighten us so often with these long words. Why not call it what it is, the *pork distemper?* And a dreadful distemper it is getting to be, call it by what name we will, and by none will it smell sweet, and the sooner we know all about it and avoid it, the better. Professor Verrill some years ago explained its origen before the Connecticut State Board of Agriculture. Professor Cressy, of Amherst Agricultural College, has on various occasions brought it before the farmers of Massachusetts, and quite recently Dr. Sutton, of Indiana, has made a report describing in full the symptoms and mode of treatment of the disease, to the Indiana Medical Society, which, if not pleasant reading to pork-raisers and eaters, is of great moment to them and the general public—although, perhaps,

"pork-eaters" is a phrase synonymous with "general public." Dr. Sutton says that from a microscopic examination of pork killed in southeastern Indiana, from three to sixteen per cent. of the hogs are affected with trichinæ—the worm causing the disease in man; that over five millions of hogs are slaughtered and packed in the Western States, not including those which are put up for family use by the farmers. If four per cent. of this pork is diseased, which the report thinks a low estimate, then there are 221,184 diseased hogs put annually upon the market, in addition to the wormy ones retained by the farmers on which to regale themselves and families. Ninety per cent. of disease produced from eating trichinous pork appears either as gastro-enteritis (something horrible from its being disguised in such a name), or as diarrhœa and dysentery, and these diseases cause a mortality of thousands in the United States every year, and as I shall show hereafter, the sufferings of those who are not privileged to die are horrible from the same cause.

Now, it is time to come together and see if this horrible slaughter and suffering of human beings cannot be stopped, and the first thing is to find out the reason and cause, remote and immediate, of the disease, and then consider the means of removing it.

In addition to the external parasites of domestic animals, they are inhabited by internal parasites, and most of the latter belong to the great class of articulated animals known as worms, constituting several distinct orders, and it is a remarkable fact that the worst of thes creatures are kept in existence only by reason of the intimate relation existing between man and his brutish dependents. The two most common tapeworms, derived respectively from the flesh of cattle and hogs, in which the young worms live, appear to be capable of coming to maturity only in the human intestine, another proof of the fact of our kinship to the lower creation underneath us, and further corroborated by what some may consider the mortifying fact that the internal arrangements, the viscera, omnivorous propensities, and the general physiological structure of the hog (and also the bear) more nearly resemble man than any other animal.

But passing over the pork tapeworm, which is acquired in man by eating raw or underdone pork, and the beef tapeworm acquired by eating dried beef and bologna sausages, cooked, and raw meats, and both productive of disease enough to make us satisfied that such diet should be avoided, we come to the causes of the more terrible trouble, the flesh-worm, the *trichina spiralis*, one of the *nematodes* or round worm family, and the most important and most dangerous of all human parasites. This minute worm in the larvæ state lives in the muscles, not only of swine and his kindred, men and monkeys, but in those of dogs, cats, rats, mice, guinea pigs, and many other animals, and in the mature state inhabits the intestines of the same animals; but it is to be borne in mind, in view of the remedies proposed for the disease the worm gives rise to, that no noxious effects are produced, except from the eating by the human species of the flesh of swine in the condition that they are. Kept by civilized man for fattening, selling and eating. Microscopic examination of the muscular tissue of a wild boar lately shot in Saxony, showed it to be full of trichinæ, but no one has ever heard of the "pork distemper" from partaking of the meat in its wild state, nor from eating any of the other animals subject to the trichina. The young parasites are so small as to be quite invisible to the naked eye, and "millions of them may exist," says Prof. Verrill, "in the flesh of a pig without producing any unusual appearance in the meatt sufficient to attract the attention even of an export." If the pork containing these worms is eaten by man, they become liberated in the stomach, and entering the intestines there grow rapidly, and become mature in two days. One ounce of pork may contain a quarter of a million or more of these worms, which, as soon as born, begin to eat and force their way through the membrane of the intestines and into the minute blood vessels and other organs, and entering the circulation they are carried by the blood to the heart, thence to the lungs, and then become diffused through the whole system, causing an immense amount of inflammation and irritation, intense soreness and pain, and death in some cases occurs from the fifth to the fiftieth day. It was not until Dr. Zenker, of Dresden, in 1860, made the surprising discovery that the trichina, which up till then had been considered a harmless little animal, could cause the death of a man, that these results became known by farther investigation, and that to the swallowing of these "worms that never die" was owing so many fevers, poisoning, and various diseases hitherto ascribed to other causes. Since that time a series of epidemics of this disease has occurred in Germany, where they eat more raw pork than elsewhere, and thousands of cases have been observed, and many dissections have taken place, and the fact established beyond any doubt as to the cause. Numerous cases have since occurred, and are constantly occurring all over the United States, traced to eating rare done, or raw pork, principally ham, where the muscles which these worms inhabit in their larvæ state are most numerous; sausages, occasionally roast pork, and pork that had been boiled an hour or two, although it is supposed that a trichina, exposed to the boiling point will die; but it is rarely that the whole of the meat cooked is exposed to this temperature, the inner parts not unfrequently coming on to the table half or wholly under-done. Experiments have shown that a large piece of meat which had been put into a kettle over a good fire, after boiling half an hour, had cooked only partly through, and had to be cut up and cooked as long again, to reach a temperature sufficient to kill the trichinæ.

When we realize that many thousand people, according to Dr. Sutton's estimate, die annually in the United States from trichinosis, and perhaps as many more are suffering horribly—almost a daily death—from distempers engendered by the same cause, it is a matter of moment to us farmers who produce and distribute, and eat, and bring up our families on pork, to see if something cannot be done to prevent such dreadful effects.

Of course, after these facts become known, no sane person will eat pork or meat of any kind unless it is thoroughly cooked; no dried or smoked beef, or ham, which has not been purified by fire (infants fed upon dried beef, a custom in vogue in Russia, being especially liable to be infested by tapeworms, and probably trichinæ); but we must go beyond this to strike at the seat of the disease.

It is evident, as before stated, that this disease, so fatal and horrible in all its aspects, is communicated from those penned together in filth, and fed on offal, often of the very worst nature, such as that of diseased animals, and other matter too villainous to mention. The hog is naturally a clean animal, and in his native state will be as free from disease as cattle; and we have no evidence of the trichinous disease ever infecting any person from eating of wild boars, nor of the herds of swine kept in ancient times, even in hot countries, nor of pork from pigs kept in a cleanly condition, and not shut up in close and filthy quarters with others. In fact, the diseases of the hog are bred from the dirt, wet, filth and bad air to which he is forced. Like any other "gentleman" who is put in close quarters, deprived of proper food and raiment, with no chance to bathe, and crowded upon by other prisoners as bad off as himself, he soon becomes disgusting; the internal and external parasites prey upon him, sores and diseases break out, and he communicates these to those other unhappy ones with whom he comes in contact. There are said to be upwards of a hundred species of internal parasitic worms found in domestic animals and man, but they are kept in their proper place by the general health and cleanliness of their *habitats*; but let the latter neglect these precautions, and the same results follow as to the vegetable creation—the apple and other fruit trees—whose parasites take advantage of any neglect of growth or cleanliness to destroy them.

The trichina in human flesh (for it occurs both in pork and in human muscle) is a very minute spirally coiled worm, scarcely visible to the naked eye, and either enclosed in a cyst, or unencysted. If a piece of pork containing these worms be consumed by man, these larvæ develop in the course of two days into sexually mature worms, and in four days more, numerous embryos are given off; these being small and vigorous worms, attack and bore through the intestines, passing into various parts of the body of their host. Chiefly, however, they lodge in the voluntary muscles, there to perish by the natural process of conversion into little limy particles, unless, indeed, cannibalistic ideas should come into vogue.

The disease set up by these parasites in boring their way into all parts of the body is called trichinosis, or trichiniasis. The symptoms of this are prostration and general indisposition, which stage may last about a week, followed by pain in the limbs, swelling of the face, and fever. This shows that the trichinæ are making their way into the various muscles. About the fourth week, the parasites may be regarded as settled in their new home; and the third stage, which is characterized by extreme weakness, supervenes. The general indications in the way of treatment are active purgation at first, followed by all means calculated to support the strength of the patient.

Hygienic.

PRACTICAL HEALTH TOPICS—NO. 5.

BY "JEWELL."

EXERCISE.

One of the most necessary habits conducive to health is exercise. By it the blood is sent to the extremities, and a healthful glow is felt from heart to finger-tips, cheeks and lips show their welcome in rosy coloring, and the step is made elastic by its magic power. Even the woman of society is beginning to understand its magic effects, and while she spurns *work*, she will nevertheless go to the gymnasium, "lift cure," or bathing establishment, there to *sweat*, or exercise in the fashionable way to gain the beauty of complexion her inactive life destroys.

I read an interesting account of a lady of wealth, whose complexion was ruined by dissipation, taking a subordinate position in a Turkish bath house where, by constant exercise and sweating, she gained a beauty of skin envied by her "circle" without the *disgrace* of labor becoming known.

And right here I would ask whether we do not make too great a distinction between work and exercise? As educated men and women, feeling the beauty of harmony in life, do we not, by our actions, degrade labor—shunning the laborer, and not seeking the toiling ones, while the idle and rich are courted and sought for? As parents, do we not give or boys *professions*, rather than *trades*, if we can afford it? and our girls accomplishments to fit them to *adorn* homes, rather than to *cheer* and *make* them what they ought to be? I would not advocate constant labor, excluding rest and recreation. Were all to contribute sufficient for their health, we would not see so many over-worked ones and a corresponding number of under-worked invalids for the want of something to do to give them sufficient exercise to keep well.

Think of the amount of strength wasted at these "lift cures" and gymnasiums, which, if rightly used, would benefit mankind immensely. Yet it is better for those leading sedentary lives to take such physical exercise than none at all. Business or home duties should provide the exercise daily needed. Our children should be encouraged to use their limbs in active sports, and be provided with the means of so doing. Our schools should contain apparatus, in a big room, to amuse and give exercise, under instruction, to pupils of both sexes, in wet weather, when out-door games are impossible. We should all be educated into the idea that it is a duty we owe ourselves to exercise daily sufficiently, and in such a manner as to best develop and preserve good health, and that it is honorable to be usefully employed while exercising. Labor should not be drudgery, nor exercise idleness. Exercise for health, and health will give a zest to useful employments.

How Farmers' Wives Break Down. A woman tells this story to the Boston *Cultivator*, and many can testify of their own knowledge that it is sadly true:

She has four little girls the oldest six years and the youngest three months. Her husband keeps six cows, and cultivates a farm of a hundred acres, employing two men to aid him. Three meals must be cooked daily for a family of seven, not counting the baby, four children dressed and cared for; the milk of six cows attended to, and butter made while the weekly washing and ironing must be accomplished in some way. From four o'clock in the morning till ten and sometimes eleven at night, one pair of hands and one pair of feet to perform this labor, and now that tired body rebels and says: "This cannot be endured."

Let me tell you of another case: The farmer and his wife have three children, all under eight years. He employs two hired men, boarding them, and keeps eleven cows. A woman comes in to do the washing and ironing, but that is all the assistance the wife receives, except the few steps her children save her. She

must rise at four o'clock and prepare breakfast, so that her husband and the "hands" can be in the field by five. Every other day, however, one of the hired men remains to do the churning for her; but this favor was not allowed her until she had threatened to call in the doctor to declare to her husband her inability to do such work. Then it was reluctantly conceded, although two forty-pound firkins of butter were packed each week; for our farmer prides himself on his herd of cows—pure blood Alderneys—and sells his butter at the highest rates, carefully depositing its proceeds in the bank and rarely giving his wife so much as a five-dollar bill of it. His last injunction to the "hand" is, "John, come just as quick as you can. Don't let Mrs. M. keep you for anything else. Hay can't wait for woman's work." There are dishes to wash, milk to skim, pans to scald, beds to make, children to dress, baby to nurse, rooms to sweep, and dinner to cook over the boiling hot stove; and one woman to do it all!"

Botany.

Classification in Botany.

ONE of the earliest methodical arrangements in a systematic classification in botany was made by Cæsalpinas, a Roman physician. Though artificial, the same may be affirmed of the systems of Gerner, Morrison, Rivinus, etc. These have been displaced by the attractive scheme of Linnæus, who must be looked upon as the great promulgator of the artificial method of classification. John Ray, an English botanist, in the year 1682, made the first attempt at arranging plants according to their affinities. Ray's scheme was very imperfect, for the number of plants then known was comparatively small, yet it has really formed the foundation of every later system. It was long neglected, and did not receive the attention it deserved until Jussien entered the field and developed Ray's views of the natural affinities in the vegetable kingdom.

Jussien's method was first made known in the year 1789, just eleven years after the death of Linnæus; since that time, the natural method has been advanced by the labors of De Candole, Brown, Endicher, Lindley and others.

Geographical botany treats of the manner in which plants are affected by climate and station, and endeavors to determine the conditions under which different families or species of plants are confined to certain zones of latitude and altitude. It is a study of great interest, and one which cannot be successfully prosecuted without an ultimate acquaintance with most of the sciences. Of course, so long as there are vast tracts of continents unexplored by botanical travelers, the knowledge upon which this department is founded must be imperfect.

Fossil botany investigates the nature of the plants found in a fossil state in the various geological formations; it is, therefore, a branch of botany and geology.

The practical bearings of botany are most important, and are sometimes treated separately in manuals of the science, under the head of Economic Botany. All the principal plants affording food, timber, medicine, fibre, dye-stuffs and other useful products, are noticed under the names of the genera which include them, and for further details of structure and classification of plants, those wishing to become perfect in botany, may study such works as "Lindley's Introduction to Botany," "Elements of Botany and the Vegetable Kingdom," and the works of Balfour, Henfrey, Henslow, Oliver and Gray.

Women.

[Original.]

TO SISTER RETTA.

BY LOU.

Oh, sister, have faith and be cheerful,
Dwell not on the dark side of life;
There's music, and sunshine, and gladness,
As well as tears, sorrow, and strife.
And, though the dark side of life's picture
May greet your sad vision to-day,
You know that the sun is still shining;
Be patient—have faith—hope and pray.
How oft, in the beautiful summer,
Dark clouds veil the blue arch above,
And the weeping sky the earth drenches
With tears—tears of pity and love.

The voice of nature of grief seems full—
Her countenance betokens woe
When rages the tempest and the storm,
Not knowing that 'tis better so.
But, when the clouds have cleared away,
How beautiful and bright she seems!
Her loving robes, with pearly drops
Bedecked, reflecting Sol's bright beams!
And so it is with human hearts:
They seem more loveable and true,
Having withstood temptation's pow'r,
Than if such fate they never knew.

If bright the sun shone every day
Upon the path we mortals tread,
How soon would wither and decay, [fled!
The heart's sweet flow'rs—their fragrance
But sun, and rain, and wind, and dew,
Each have a mission to fulfill—
Each their appointed work to do,
Directed by the Higher will.

How often, in the days gone by
Have bitter tears bedimmed our eyes;
How often found those trials but,
To us, real blessings in disguise.
The trials of an adverse fate
New strength and beauty will impart
Unto the virtues of the true,
Uprooting evil from the heart.

Woman.

No star in yonder sky that shines
Can light like woman's eye impart;
The earth holds not in all its mines
A gem so rich as woman's heart.

Her voice is like the music sweet,
Poured out from airy harp alone;
Like that, when storms more loudly beat,
It yields a clearer, richer tone.

And woman's love's a holy light,
That brighter, brighter burns for aye;
Years cannot dim its radiance bright,
Nor even falsehood quench its ray.

But, like the star of Bethlehem
Of old, to Israel's shepherds given,
It marshals with its steady flame
The erring soul of man to heaven,

WOMEN AND THE CENTENNIAL LEAP YEAR.

BY A. G. S.

LEAP year is woman's year, by long custom and usage; which fact gives special interest to our grand National Centennial. Women by a sort of natural courtesy, are invested with certain social privileges during this year, not recognized in the law books, which, in these revolutionary and progressive days, may be made a mighty driving wedge for a complete victory of perfect social equality and independence. Eighteen hundred and seventy-six, then, should prove the best leap year of the whole century. Beloved sisters, improve your opportunities before too late. Make yourselves quite happy in this young, vigorous and promising country. Leap year, courtship and matrimony come under one head, and the ladies now have it all their own way. Gentlemen! take a back seat, and wait for an invitation. Ladies! become the floor managers for all the world to dance.

In a hundred years the scope of woman's sphere and influence has widened marvelously. The relation of sex is better understood. Woman knows herself, and man appreciates; and, without assumption or violence, but as natural as the rosebud develops, woman becomes the accepted and coronated queen of the realm.

The distinction of sex is universal, and runs through all nature—in the human, animal, bird, fish, insect, and vegetable kingdoms—and each is propagated, preserved, beautified and perfected by sexual elimination. Plants bloom, and fill the whole house with their fragrant charms. So woman is the flower of humanity, and, to the dreary, hum-drum, tread-mill world, she is like a mighty green-house with its millions of sweetest blossoms.

The reputed progenitors of mankind may, or may not, be mythical; but the real Adam and Eve are living actualities, being every man and woman; and the true paradise of earth is *every happy home!* Heaven is no monopoly, but is accessible to all, love being its delightful element. Every woman is a real Eve—the embodiment of love; and true marriage, the real Eden. So, under such a happy defining, every human being is born into a perfect Eden, to tend, dress and beautify it—though so few are aware of it. But, who should ask or desire anything better? There is no higher bliss.

Thus, the sphere of woman becomes exceedingly broad, and hereafter she will not skip or leap over, but reign right along. The domestic circle is her proud domain—the true Grange, council and fountain-head of formative character, for temperance, peace and all moral virtue—which extends through all society and over all nations. Her most perfect sway is in the Caucasian race. Yet, even the Mongolian, Malayan, African and Indian tribes yield something to her at the fireside, culinary board and nursery—proving HOME to be the natural and quiet avenue of her ultimate triumph and control. She kneads and moulds the savory bread, makes up the soft and downy couch, and spreads the rich and inviting table. And, if "the hand that holds the bread" is the power that makes the law, certainly woman's faithful hand, everywhere, that molds and bakes, boils and stews, and feeds the hungry multitude, will force its highest claim on the nation's statute books.

Man's boasted record is on the gory battlefield, whose dark and dreadful pages blacken all history. To build forts and arsenals, gunboats and navy ships, march invading armies, confiscate and destroy property and life, and chattelize and beastinize his fellowbeings, filling the world with widows and orphans, poverty, suffering, misery and death, man may esteem as his peculiar pride and glory—always claiming the high and solemn sanction and approbation of God and the Bible, church and religion. But women and angels, in earth and heaven, flee and hide, weeping, at the horrid and sickening spectacle.

Well may woman rejoice in her womanhood, and be glad she is not a man. For, though she is made the helpless victim of his pride or baseness in countless ways, while he is called "her gallant protector," yet, through wise and mysterious processes, in the patient course of ages, she will become his full redeemer.

It may be said that women share with men in all things; and, so far as they are mixed up and compromised, they bear the blame without complaint. Yet, we contend that the distinctive woman element of love and affection that softens, wins, persuades and charms, is a true redemptive power of humanity. This blessed principle, or moral leaven, is gaining in magnitude and strength, and is destined to become the world-conqueror. Then will come the millennium. A thousand years, or four, or one—that is the perfected leap year. All hail to that coming time—woman's era of love!

Affection binds society together by heart-ties; and, while man works and rules by force and violence, woman's better way is through smiles and tears, whispers and music, kisses, caresses and children.

"Honored be woman! She beams on the sight,
Graceful and fair, like a being of light;
Scatters around her, wherever she strays,
Roses of bliss o'er our thorn-covered ways—
Roses of paradise, sent from above,
To be gathered and twined in a garland of love."

Champlin, Minn., Sept., 1876.

GIRLS! listen to this, and with virtuous resolve demand, as your right, a pure love:

Young men of bad habits and fast tendencies never like to marry a girl of their own sort, but demand a wife above suspicion. So pure, sweet women, kept from the touch of evil through girlhood, give themselves with all their costly dower of womanhood, into the keeping of men who, in base associations, have learned to undervalue all that belongs to them, and then find no repentance in the sad after years.

There is but one way out of this, and that is for you to require in associations and marriage, purity for purity, sobriety for sobriety, honor for honor.

There is no reason why the young men of this Christian land should not be just as virtuous as its young women, and if the loss of your society be the price they are forced to pay for vice, they will not pay it.

This is plain, sensible talk, and just such as ought to be heeded by all our boys and girls, till the much needed reformation is fully established. Too much of the happiness or misery of our children depends on this for it to pass without producing deep reflection and action in the right direction.—*Ed.*

DON'T, GIRLS. Don't think that yards and yards of ribbons, ruffles and laces will add one particle to your real value. Don't make a walking milliner's shop, or a jeweler's store of yourselves, covering all that is of *real* merit within you with that which will attract only the shallow-brained.

Don't think sensible people are to be deceived by vain show: they look for the beauty of heart and mind. Don't flatter yourselves it is smart to affect ignorance of manual labor or to be ignorant of it. Don't give the subject of matrimony a thought while you are in your teens, except to qualify yourself for the responsible position it places you in; you need all that time of your life to fit yourself for it. You need to study books, the laws of life and health; to be skilled in the culinary art, as perhaps the happiness and health of hundreds are depending on your knowledge of this.

Don't give your time and talents to

the world, or to seek the things of time and sense that perish with their using. God has created you for a nobler purposs, and made you accountable for what he has given you. Don't sell your birthright for a mess of pottage.

Don't Hurry, Girls.—One of the crying evils of these times is the tendency and disposition of girls to get through girlhood hurriedly and get into womanhood, or rather into young ladyhood, without waiting to enjoy the beautiful season of girlhood. Speaking on this point, Bishop Morris says, "Wait patiently, my children, through the whole limit of your girlhood. Go not after womanhood; let it come to you. Keep out of public view. Cultivate retirement and modesty. The cares and responsibilities of life will come soon enough. When they come you will meet them, I trust, as true women should. But oh! be not so unwise as to throw away your girlhood. Rob not yoerselves of this beautiful season, which wisely spent, will brighten all your future life."

Educational.

The "Brothers of the Plow" to the "Brothers of the Pen."

"The war drums throb no longer;
The battle flags are furled;"
And now we lend together here,
The men that rule the world.
The spade my sqtire, brother,
And yours the mighty pen,
We rule the world between us;—we,
Its working, thinking men.

You at your press, my brother,
And I upon my farm,—
The one the world's great thinking brain;
And one its strong right arm.
For senators and judges,
They're but the tools we use;
And it we find they will not do,
Why better ones we'll choose.

So if we strive together,
With honest hearts and bold,
To make the century to come
Still grander than the old,
Our sons and daughters nobler far,
In soul and body free,
Shall teach the world of future days
What man was meant to be!

THE LOVE OF CHILDREN.

BY NEMO.

I LOVE not him who loves not little children. A desert of Sahara is the home without them. Those sinless faces—what arguments for virtue! What invitations to erring man back to the bowers of innocence!

And why should there be homes without children while there are so many children without homes? Men of means, men without children, gather up the innocents. They will be apostles of virtue to you, as you may be missionaries of knowledge and virtue to them.

Examples teach. The motives to moral purity multiply a thousand fold in the presence of children. He is but a barbarian who, by word or act, would tempt them into the ways vice.

He is the best lover of children who loves them for their capabilities. He sees in their rudimental faculties the undeveloped greatness of educated, capable men and women, and loves them less for what they are, than for what they may become.

Look on that tree bent, gnarled and knotted, and on this proudly wearing its leafy honors—a very symmetry. They were healthy acorns once, and the soils are alike fertile in which they grow. But outward appliances, extraneous influences dwarfed and deformed the one and developed the size and symmetry of the other. Worse than the lightning's stroke or the woodman's ax, are the causes which distort or degade the growing-up man or woman.

See that boy with his mouth bedaubed and besmeared with the juices of tobacco. Commencing at so young an age in a habit that deranges the nervous system and stupefies the intellect, his best endeavors can make him only a fraction of what he might have been. Can he who loves little children tempt them into injurious habits?

See that man staggering in the street, blaspheming his God with every breath. His friends have deserted him, his wealth has been squandered, and his hopes and prospects are blighted forever. Could he have loved little children who tempted him to the first glass?

The children are the embryonic state—the Republic in abeyance—they prophesy of the future. "Give me the education of the children of the nation," said Napoleon, "and I will govern the nation."

Ask you what is to be our future? Look to the children and receive the answer—remembering in its interpretation that knowledge and virtue, skill, habits of industry and economy are the necessary factors of good citizenship.

Athens looked well to her youth. Her wisest and best were their teachers: heroes who had won glory in the field, statesmen who had been crowned with civic honors, sages who had tathomed the depths of philosophy, and whose lives were an exemplification of the purity of their doctrines.

Socrates had won fame as a soldier, and opposed alone in the Grecian assembly the edicts of the Thirty Tyrants. But his greatest work—his crowning glory, that for which succeeding generations have remembered and loved him—was his instruction of the Athenian youth.

Plato gave eight years to the study of philosophy under Socrates, went to Italy to study in the school of the Pythagoreans, and into Egypt to learn the esoteric doctrines of the priests, before he opened the Academy for the instruction of Grecian youth.

Aristotle, beginning in his seventeenth year, gave twenty years to the Academy of Plato before he became the tutor of the son of Philip of Macedon; and he had a renown for learning as far as Grecian civilization extended when he established the Peripatetic at Athens.

Pythagoras, before he became an instructor of others, was a disciple of Thales, Pherecydes and Anaximander, and had traveled in the search of wisdom over the then known world. He had studied the esoteric philosophy of Egypt and India. He had studied the Zend-Avesta of Persia. He had visited Gaul, Arabia and Palestine. He was himself most thoroughly instructed before he assumed the role of instructor.

When American statesmen, heroes and sages shall give their latter and, therefore, their best days, to the instruction of American youth—give them the benefit of their talent, their knowledge, and their experience, we may hope that America may become what Athens has been, the light of the world and the instructor of the coming ages.

Horace Mann at Antioch is greater than Horace Mann in the Congress of the United States. Having held with great distinction various offices of civic trust, his glory culminated in the teacher. Our country has no dearth of men, but it is in sad need of more Manns.

San Jose Institute, Sept. 1876.

Household Reading.

For Better or For Worse.

You thread with tender fingers, oft,
The shining ringlets of my hair;
You tell me they are fine and soft,
And yet, you say, your heart they hold
In their long links of sunny gold—
An idle, willing prisoner there.

And you have told me, when my hand
Lay warm in yours, that in its clasp
Your future waited, great and grand,
If I should choose to let it stay.
But that, if it were drawn away,
All hope would fly beyond your grasp.

And you have said, times not a few,
That death, when'er it cross your way,
Will find your heart as firm and true
As now, when blithe, and young, and fair,
You gauge me by my shining hair
And by my smiling eyes to-day.

And though I think a truer heart
Ne'er breathed on earth than yours, I know
That if, with hand in hand we start
On life's long journey, there will come,
Ere one of us in death is dumb,
Words of regret and bitter woe.

For you love beauty; and some day,
When Time comes by and dims the fair,
He'll turn, with touch of sure decay,
My golden links to gray—and lo!
Your heart will slip its bonds and go
In new-found freedom otherwhere.

And the white hand, whose clasp in yours
Makes all, you say, your life is worth,
Might, even as its touch assures,
Be strong some day to cross your will,
And, right or wrong, persist until
It should become your bane on earth.

And when death comes, as come it must—
To me, suppose—'twill better be,
If, looking on my quiet dust,
You can say faintly through your tears,
"We have been friends for many years,
And she was very dear to me,"—

Than that, with bitter, parting sigh,
You should look back, far back again,
Along a wasted life, and cry,
"Ah, better had I lived alone!
For we had long estranged grown,
And life was naught but constant pain."

So, friends in deed, and word, and thought,
Let us shake hands and go our ways,
And some time, when the years have brought
Their many changes, we can see
That it was better things should be
Just as they were in former days.

DOTTINGS AND JOTTINGS.

BY ISAAC KINLEY.

IT is not enough to know that the "wages of sin is death." Reason may teach that every step astray is on the road to danger. Gray-haired wisdom may warn against the destruction which awaits on the right hand and on the left. Science may demonstrate that any infraction of nature's law brings inevitable retribution. Poets may sing "To enjoy is to obey." The world knows all this. And yet who is there who does not suffer in his own person the penalties of violated law, moral and physical?

Does not that man in the felon's cell know that it is not right to appropriate as his own the property of another? Is the man on the gallows ignorant that murder is a horrible crime? Was it ignorance that plunged this country into a murderous civil war? These men in office, who receive bribes and grow rich out of their stealings from the public treasury, are they so uninformed as not to know that perjury is a crime against God and man, and that peculation in office is treason to the State?

Emotion is king. We must grow to feel that there is right and wrong. In the education of youth, it is not enough that the intellect be taught. There should be developed in the pupil such a high moral sense as will be a constant restraint when temptation comes—a constant encouragement to virtue when action is demanded.

Truth is ever aggressive. One after another, the strongholds of error give way. Her sword is always unsheathed, and her banner never trails in the dust. If her followers falter or faint by the way others of more courage and endurance take their places. If the captains of her hosts prove weak or false, better soldiers are promoted from the ranks, and the battle still goes on.

"He that is without sin among you, let him first cast a stone at her," was the rebuke of Jesus of those who would inflict on a pariah the penalties of the Judaic law.

A beautiful lesson of charity is here. No one being perfect—no one being without sin, we should learn to pity rather than despise—to elevate rather than degrade the fallen. How often in our censure of others, do we heap condemnation upon ourselves!

Ego, I, myself—egotism, the most unlovable of all isms. It is impossible to admire, and difficult even to respect, the man or the woman who is ever flaunting in your face, the pronoun *I*, spoken in italics. Genius itself cannot charm, if his possessor is an egotist.

He lives most wisely for himself who forgets himself in his love for mankind. Actions are correlative forces, and who gives receives. For every good deed done, for every kind word spoken, comes a blessing. For it no repentance comes nor tortures of remorse follow.

Of less value than dust on the sole of the shoe are the professions of religion that are not exemplified by a life of virtue. He is a liar and the truth is not in him, who asseverates with his lips his love of God, and daily violates, in his acts, God's moral law.

So great a man as Bacon denied the diurnal revolution of the earth, and seriously suggested as a subject of inquiry, *whether, since the center of the earth is the center of gravity, the concave of the sky may not be the bound of levity!*

It is no merit of ours that we think to better purpose, but rather that of those who have gone before. If we have climbed higher the mountain, it is because our fathers have led the way, bridging the chasms as they went along.

No one willfully wrongs those he loves. If the world loved more it would sin less.

When all men shall learn that their enemies are also their brothers, they will hasten to be reconciled, and nations will cease to shed each other's blood.

Honor, it is said, there is among thieves. Leagued rogues and bandits are faithful to each other, and if they loved mankind as well, their vocation would be gone.

Love is the greatest of all reformers—the fulfilling of the law.

How a single train of thought seizes the mind and carries it per force, try as we may to rid ourselves of it! Call in other subjects, strive to think other thoughts—it is of no use. The place is pre-empted, and the occupant will have his way.

We may—we should condemn the wrong; but before we refuse all sympathy for the wrong-doer, let us reflect what we ourselves might have been or done had we inherited his passions and been subjected to his temptations.

But sympathy does not imply justification. We may pity but not approve. I may help my neighbor out of the mire without stopping to ask by what steps he got into it.

San Jose Institute, Sept., 1876.

MASCULINE SUPREMACY.

BY "GIRLS' RIGHTS."

Now Grandpa says: "When masculine supremacy is duly observed in its legitimate sphere, you have there found always the most happiness." Yes, that is right. But Grandpa is not quite clear in defining the boundaries of that "legitimate sphere" in the case he points to to show the good results that came from a firm adherence to the doctrine of "masculine supremacy" in the husband. It may have been very well in that particular case; but I fail to see how it proves anything in favor of "masculine supremacy" in other cases. Now I could mention a good many cases where husbands have used this assumed supremacy to the ruin of their fortunes and brought their wives to poverty and privation, when, if they had listened to the good judgment and earnest entreaties of their wives, or had observed their rights in the premises, they might have been saved from that disaster.

Again, he says, "it is the *husband's* home" the wife comes to, and "he only is competent to judge," etc. Now, couple this last sentence with another further back, "where is the wife who does not love her husband the more for being able to confide in him," etc., and we can draw a conclusion, and that is, if you have made up your mind that *he* is competent, and that *you* are not competent to judge in these matters, and you have full confidence in his love for you, and that he will treat you with kindness and due respect, and you truly love him—why then you need not ask any more. But I am puzzled to understand how a man of judgment and culture can really *love* and *respect* a woman who does not know enough to be a competent judge in the matter of the ability to have a comfortable house to live in, or a comfortable buggy to ride in—if she is posted in the financial affairs of the firm as she *ought* to be, and has a *right* to be.

But we will now consider the proposition, and wait the result. He says the "home" is *his*, and in consequence of his "masculine supremacy" he alone is not only *qualified* to judge of the necessity or propriety of any change about the wife's residence, but has the sole *right* to make or not make changes.

Soquel, August, 1876.

"RACHEL'S" SENTIMENTS APPROVED.

Mr. Editor: Please give my regards to "Rachel A. Ely," Mrs. or Miss as the case may be. She has told us a valuable truth, and told it well. No one can wilfully violate a physiological law without violating, at the same time, a moral law.

A man has no more right to destroy his constitution by slow degrees than he has to do it by suicide outright. Chewing and smoking tobacco and eating opium, for example, are only species of slow suicide, moral and physical—certainly deteriorating both mind and body during life, and cutting off many days at the close.

I have seen men who would shudder with holy horror at the thought of a little needed work on the first day of the week—which the Lord never commanded to be kept holy—and yet thrust great quids of the nastiest of all nasty weeds into their mouths and masticate them with the zest of one enjoying religion.

Now, the use of tobacco tends to induce general debility, making the body a ready prey to all the diseases to which the human system is liable. To use it is, therefore, a sin; and he who does so, however loud he may be in his professions of religion, is a sinner, and can hope for salvation only through the abundant mercies of God.

Look out there in the street. See a half dozen little boys with cigars in their mouths. Others than they, in this case, are sinners. If the parents and instructors of these children had done their duties to them, they would not have contracted this suicidal habit. It is morally and physically impossible that these shall ever be fully developed men. They can never be what they might have been. Debilitated, diseased, they must of necessity be. Growing old before their time, they will be superannuated at fifty, and die of senility when they ought to be in their prime.

Are not that father and mother sinners who have permitted their children to use tobacco before they have arrived at the age of accountability?

I this day passed the doors of a Sabbath-school, and saw a dozen young urchins puffing away at their cigars preparatory to their religious exercises. What have the Sunday-school teachers been doing, that they have not taught them that it is a sin to defile "the temple of the living God?" Nemo.

San Jose, Sept., 1876.

CHILDREN AND PETS.

BY BUSY BEE.

I wonder if parents, as a general thing, realize how important it is to cultivate and encourage a taste for pets in their children. Every child should own some special pet—a dog, cat, calf, cow, horse, or even a chicken, anything it may fancy—and be taught to take care of them and to be kind and gentle with them, and on no account be allowed to strike or scold them. My little boy has a dog, of no particular value, at the same time we would not take a good deal for him, because the child is so attached to him. At first, as children will, he would get angry at the dog for not minding, perhaps, and strike him. But I make it a point never to allow a child to strike an animal, and by telling him how bad his dog would feel to have him scold or whip him, and that we must try to make all dumb animals love us, he now thinks it would be dreadful to abuse the poor animals that cannot talk, and he notices the least cruelty in others. Only teach our boys to be tender-hearted, and to love dumb animals, and I think it will have a beneficial influence all through their lives. The same rule works as well with girls, only I think they are naturally more gentle and thoughtful than boys. But let them all have pets, and plenty of them, and teach them to love them and care for them. We make pets of everything on the place. Each cat has some particular trait that is noticeable, and our horses are all individuals, and each dog has his peculiar way. If your little boy or girl brings a poor, forlorn kitten or puppy that they have found to you, expecting your sympathy, do not say, "Oh! the nasty little thing! Go take it right straight back; I can't have any cats or dogs under my feet," and see the poor child gather the scrawny, forlorn cat or dog up in his arms, and with eyes full of tears, and aching little heart, take the beautiful pet (beautiful to them) and carry it sorrowfully back. But, on the other hand, put up with the bother—if indeed it is a bother—and say, "Oh! poor little doggie! He shall have a good home, and we will feed him so nice, and he shall not be abused." In short, make your child happy by your own earnest sympathy and interest, at the same time cultivating a regard and sympathy for helplessness in every form.

San Jose, Sept., 1876.

CLEANINGS.

BY HELENA.

Dear Editor: It may be interesting to your readers to know some of the hardships of life so patiently endured by many of our women. In this Centennial year, when the question of womans' equality with man is being discussed freely, and the rights of women as law maker and voter has, to many minds, become a settled matter, it would be well to enquire into the reasons for such convictions. In the course of

A DAY SPENT IN CANVASSING

for your excellent journal, I found ample proof to convince the most skeptical of the one-sided arrangement of affairs at the present time. Mothers with children clinging to them, told me, with tears starting to their eyes, of their harrowing circumstances. Of their husbands who were once thrifty and prosperous, now passing their time at the grog-shop; and when remonstrated with for bringing themselves home in such a plight, made the flimsy excuse that the liquor cost them nothing at all, as the liquor dealer was a good friend and was grateful for past favors. No thought was given to the needed

BREAD AND BUTTER FOR THE FAMILY!

No new clothes for the once attractive wife and growing girls. The mother had been self-supporting as a girl, and with money in the bank, she laid her hand in his, promising to love, cherish and obey till death. The burden of that promise was beginning to be felt; and what but despair in the future for such a heart? At every turn the open door of a saloon to entice one to enter where boon companions made the time pass pleasantly, and all care banished away. What matter if the sad-eyed wife sat sewing by the lamplight to bring food to her hungry family, he was having a good time, and, when hardly able to stand alone, he crept home and to his bed to sleep away the effects of the miserable liquor.

Turning with a saddened heart from such a picture of man's degradation, I enter a neatly painted cottage, and the opening door disclosed to my view a glimpse into such a home as

TEMPERANCE AND INDUSTRY

only dwells in. Entering into conversation over the merits of the Agriculturist, I chanced to remark upon its sound principles of temperance reform, when the lady, with enthusiasm, exclaimed: "That's the paper for us! You know my husband, who used to lounge away his time at the saloon and come home at all hours of the night. Well, thanks to the good Champions, he is now all right. We sit together in the evening, after the children have gone to bed, and talk over the old times, and I know he will never go back to them. See he has paid for our home and built a house on the end of the lot, which is rented to a good tenant. He tells me he was never so happy before as now. Yes, we must have the paper, and I wish all the world could know the joys of life with a good, temperate man."

When I meet with such a case, Mr. Editor, I feel it a duty to place it before the people that all may believe that reform can be accomplished.

A SATURDAY-EVENING REVERY.

FROM M. E. T.

Supper is over the last pot and pan neatly washed and set away. With tired feet I seek the plain little sitting-room, and sit down to meditate. I do think if there is a class of people on this earth to be pitied, it is that class denominated "poor, but respectable." To some this may appear a strange way of thinking, but those who have experienced the troubles and trials belonging to this class will certainly agree with me. I ask, what does the effort cost us to imitate our more fortunate friends, those with whom we associate and who—apparently, at least—regard us as equals? We must dress as nearly as possible as they dress; to return their hospitality we must load our table with delicate viands, and to enjoy their visits we must fashion all our surroundings after a style that is *not* our own. To accomplish this difficult task, we not only make of ourselves positive slaves, but do a thousand things that tend to rob our homes and our loved ones of true comfort. Not that I would condemn that innate pride in the human heart, which is right enough and commendable to a certain extent, and without which we would be comparatively worthless; but, rather, by what means are we to *know* when we have just enough? Where shall we place the dividing line that confers on one side all due courtesy to friends, and inflicts on the other side no injustice to ourselves? And, above all, how are we to possess ourselves of that firmness and independence necessary to a course of action? Why will we go on acting for ever against our better judgment, treading a thorny pathway merely to *look* at the roses that bloom for others, giving, O! so much for so little? The majority of us are aware, too, of the evil consequences attending such a course—consequences that I ask some sympathizing reader of the Agriculturist to assist me in numerating, and which shall furnish food for another Saturday night's revery.

☞ Watches of superior and attractive style and make at Louis Chopard's, at very low prices. Something worth your while to look at.

Boys and Girls.

Turn About.

BY ELLA WHEELER.

Turn about, boys, turn about,
Help us drive the demon out;
Turn before you reach the brink
Where so many thousands sink
But ruin, who began
Just like you, my little man.

How? Well, first they strutted round
With cigarettas that they found;
Then, to imitate grown men,
Sipped at liquor now and then,
Interspersing with a "chew."
Now, is not that just like you?

When they grew to man's estate,
Can you guess what was their fate?
Drunkards, loafers, louts, and knaves,
Filling jails and early graves.
Surely you would rather grow
Into noble men I know.

Think, then, think how they began;
Shun their habits, little man.
Turn about, yes, turn about
Ere you grow to be a lout.
Turn about boys, turn about,
Help us drive the demon out.

Suppose.

Suppose, my little lady,
Your doll should break her head;
Could you make it whole by crying
Till your nose and eyes were red?
And wouldn't it be pleasanter
To treat it as a joke,
And say your glad 'twas dolly's
And not your head that broke?

Suppose your task, my little man,
Is very hard to get;
Will it make it any easier
For you to sit and fret?
And wouldn't it be wiser,
Than waiting like a dunce,
To go to work in earnest
And learn the thing at once?

Suppose the world don't please you,
Nor the way some people do;
Do you think the whole creation
Will be altered just for you?
And isn't it, my boy or girl,
The wisest, bravest plan,
Whatever comes, or don't come,
To do the best you can?

OUR CORNER.

SEVERAL letters were crowded out of our corner last month, and so Aunt Polly will be short with what she says, not that her heart is not full of good things and thoughts for her dear ones, but to make room for you all with your nice letters. You will see that quite a number of the puzzles given in previous numbers remain unanswered. Now try to find out as many as you can of them, and what are not found out by any of you will be entitled to premiums, and the answers will be given that you may see which ones have puzzled you all.

Now what have we in the letter bag?

Strickland, Mich., Aug., 1876.

Dear Aunt Polly: I had just given up ever getting my chromos, when uncle Nathan come home from the office with them. I think they are just as pretty as they can be, and I thank you ever so much for them. I have made out two of Tillie's puzzles in your July number. The answer to her second one is "Aunt Polly," and to her third one, "George Washington." I would try to make you a puzzle too, but I am so busy going to school that I don't have time. I have to get my Sunday-school lessons nights and mornings, besides helping my ma and getting my other lessons. Good by.

Lucy Ford.

P. S,—I have a sister 15 years old. She wants to know if she can come in, too. Her name is Jennie. L.

Why, of course; Aunt Polly doesn't want to shut anybody out, big or little, who wants to come into the Corner. The only reason she graded the ages of those making out puzzles was to give the little ones a fair show with those older, that's all.

Mountain Home, }
Mono County, Cal., Sept., 1876. }

Ed. California Agriculturist: *Dear Sir*—Some kind friend sends your valuable paper to my papa. Whoever it is, he will please accept our warmest thanks, and when it ceases to come we will send for it again, if we can raise the money, as we all love to read it, and papa says it suits him better than anything he has read lately.

Well, Aunt Polly, I send answers to two of your puzzles—one is "Maude Charlotte Card Victoria," the other is "Hyacinth." May Sherwin.

Glad you like the Agriculturist so well, May, and that you will contribute to Our Corner. The publishers send the magazine to your father three months at the request of a friend, and will be glad to get your father's subscription.

Natividad, Sept., 1876.

Aunt Polly: I live down here in Natividad. As I did not go to school to-day I looked over the "Corner," and found out Tillie's puzzle. If I take *o* from a city in Nevada it leaves Elk; if I take *r* from a city in France it leaves Hare, and if I take *a* from a city in Norway it leaves what we all should be—Christian. I am just 13 years old, and although not as smart as the President of the United States, I think I am able to write a few lines to Aunt Polly, anyhow.

Joseph Riordan.

P. S.—My father asked me to find out how I could cure figs, and I told him I would write to you and ask your advice.

J. R.

How to cure figs.

The Editor says that the best way to cure figs is to do as the Turks do (not the turkeys) away off in Smyrna. In the first place, the figs must be fully ripe, ripe enough to drop from the tree by shaking. A canvas or cloth is spread under the tree and the ripe figs shaken upon it. It is best to support the spread by tying its corners to stakes to keep the soft figs from mashing as they fall. Only the ripe ones will fall by shaking moderately.

The next thing to do is to have a pot of strong potash lye, very strong lye. Fill an open basket with figs and dip into the lye, holding them immeesed in the warm lye five minutes. The use of the lye is to destroy the skin and natural, ize the acid under the skin, so that the fig, when dry, will be tender and sweet. Figs may be dried without using the alkali, but they will not be so nice.

The next thing, after dipping into the strong solution of potash, is to let them drain over the pot. Then spread them carefully on boards as you would other fruit, taking care not to jam the figs. When night comes, cover so as to keep away the dew. In two or three days, or as soon as the figs are half dry, they may be pressed flat with the hand, and before they get too hard must be packed in layers closely in boxes—the tighter the better. By observing these rules and doing the best you can you may have figs, dried figs, as nice as the Smyrna figs of commerce.

Of course, the large, rich sorts make the best dried figs, as the best peaches or apples make, when put up, better fruit than poorer kinds do. No sugar is needed when packing the figs. The sugar you see in imported figs all comes from the fruit after it is packed in boxes.

Livermore, Sept., 1876.

Dear Aunt Polly: I have vacation now for two weeks. When we had school we tried playing "Dixie," and splendid fun. I thank you very much for telling me how to play it. The answer to Tillie's first puzzle is, Agriculturist. The names of the places are, Elko, Havre and Christiana.

Yours, Mary C.

From Sarah Sallie, of Plymouth, Amador county, Aunt Polly gets a list of rivers and mountains west of the Rocky Mountains. Sarah makes out 713, all classified. She is only 14 years old, and deserves a special premium, so Aunt Polly will send her the "Peasant Girl at the Well," a very fine chromo.

LINDA'S ORPHAN ASYLUM.

by lulu.

Linda lives in the country. She has no little girls or boys to play with, but she has an "orphan asylum." At present, the only inmate is a little white chicken. The old buff hen came off the nest with five little balls of down, but something happened to four of them, and the naughty old hen thought it beneath her dignity to scratch for one chicken, so she deserted the poor little thing, and his innocent life would soon have been over, had not Linda's tender heart prompted her to take care of the orphan.

Every night Chickey comes in for her to take care of him; so she puts him in the chip pail, covers him up snug and warm, and he is soon in the land of Nod. In the morning she is up bright and early, and his contented little peep says he is well tended and fed. It is amusing to see him hopping about his tin plate, eating crumbs and taking sips of water from his little tin dish. If he does not drink often enough to suit his foster-mother, she catches him up and dips his head in the water. In the daytime he runs outdoors, but comes in often to dinner. Linda calls him her "orphan asylum." When he gets older I expect he will bother her mamma so much that some day we will have some nice chicken stew.

Some time I will tell you more about Linda's pets, but if I say too much at once, Aunt Polly's patience will be gone and the little folks will never hear of the "orphan asylum."

MUSINGS OF A '49ER.

by uncle arthur.

It is now nearly a quarter of a century since I first put foot on the golden shore of California. Then but a boy in my teens, lured from home by the bright prospects of a "golden harvest," "I struck out," as the saying goes, ox-gad in hand, with a will and determination to face the tempest and the storm, to cross the dreary desert and scale the mountain hights in order to obtain—what shall I say?—"a pocket full of rocks" in California!

Well, at the expiration of several tedious months, I arrived here, ragged, dirty, bleeding and sore, and if ever I thanked Providence it was about that time. Although not having ten cents to my name, my heart was full of hope.

But if ever man needed the exercise of patience, it was in those times of crossing the plains. And this brings to mind the time when, in spite of my religions proclivities, the "unruly ox" provoked me to profanity.

Many experiences have I passed through since then, too numerous here to mention, but as opportunities offer I will continue my rambles and experiences.

"I'll Pay You for That!"

A hen trod on a duck's foot. She did not mean to do it, and it did not hurt her much. But the duck said:

"I'll pay you for that!"

So the duck flew at the hen; but as she did so her wing struck an old goose who stood close by.

"I'll pay you for that!" said the old goose, and she flew at the duck; but as she did so her foot tore the fur of a cat who was just then in the yard.

"I'll pay you for that!" cried the cat, and she flew at the goose; but as she did so her tail brushed the eye of a sheep who was near.

"I'll pay you for that!" cried the sheep, and he ran at the cat: but as he did so his foot hit the foot of a dog who lay in the sun.

"I'll pay you for that!" cried he, and he run at the sheep; but as he did so his leg struck an old cow who stood by the gate.

"I'll pay you for that!" cried she, and she ran at the dog; but as she did so her horn grazed the skin of a horse who was by a tree.

"I'll pay you for that!" cried he, and he ran at the cow.

What a run there was! The horse flew at the cow; and the cow at the dog; and the dog at the sheep; and the sheep at the cat; and the cat at the goose; and the goose at the duck; and the duck at the hen. What a noise they made to be sure!

"Hi, hi! What is all this?" cried the man who had care of them. "I cannot have this noise. You may stay here," he said to the hen. But he drove the duck to the pond, and the goose to the field, and the cat to the barn, and the sheep to her fold, and the dog to his house, and the cow to her yard, and the horse to his stall.

"I'll pay you for that!" said the man.

—*Nursery.*

LIQUOR AND TOBACCO AT THE CENTENNIAL.

As might be expected, the whisky, wine and tobacco manufacturers and manipulators take great interest in the Centennial show. So long as the sense of the people allows the productions to be classed under the head of "agricultural," so long they will claim respectability and be barnacled upon any and all shows that are gotten up to foster industrial pursuits. Thrown upon their own merits, as they should be, without the support of the name "agricultural,"—a name they are not justly entitled to—they would most likely seek some corner and appear less conspicuously. So long as we live, we will never recognize such debasing business as the manufacture, sale or use of liquor or tobacco as legitimate "agricultural" pursuits.

The effect at the Centennial show is thus touched upon by Geo. E. Waring in the *American Agriculturist:*

If we take out the barrels, bottles, cans, and boxes, which are filled with whisky, rum, gin, tobacco, cigars, starch, tomatoes, etc., we rob most of the foreign exhibits of their crowning glory, and sadly take away the brilliancy of the display that even our own country has been able to offer. This is not the place in which to print objections to the products of the still, the wine-press, or the tobacco field, but to see at least one-fourth of this fine building filled with a dazzling display of cooperage, glass-blowing, and label-printing, is simply absurd. All this part of the show is beneath contempt, and, as an exhibition, has nothing whatever to do with agriculture—the tobacco exhibit is not quite so subject to this criticism. A pyramid of barrels, said to contain whisky, highly varnished, with gilded hoops and ornamental brands, gives one a far less adequate idea of the products of the industry of Canada, than would a simple, printed statistical table, showing the amount of whisky that she produces as compared with other countries. All this sort of thing is a fraud. It pretends to be an exhibition of materials—it is in reality only an exhibition of packages, and packages are not worth sending to a world's fair. Several foreign countries have sent instructive and representative exhibits. Those of Brazil and Liberia are conspicuously so, but with a few notable exceptions of this class, there is more of interest in the exhibitions of Oregon, or Iowa, or Massachusetts, or indeed in Landreth's exhibition of grains alone, than in the whole of those of the great foreign countries. If one is seeking the *beauty* of a display of soil pro-

ducts, no more beautiful example can be found than in the collection of pine cones from California—a collection that surely should find its place in some Eastern museum.

Correspondence.

GARDENING AND FARMING ON KERN ISLAND.

ED. CALIFORNIA AGRICULTURIST: Mentally, I step into your sanctum this evening, and up comes the question "What are you doing on the Island?" O, there is always plenty to do here. We can plant something every day in the year. Squashes planted in August are about to start runners. Some of the potatoes are a foot high, and others just coming up. Beets just up; any time now is good to plant beets. Turnips, peas and beans six inches high. We expect to make a crop, but that green corn only a foot high may not make roasting ears. Early sweet corn is ripe; so with early Marblehead and Turban

SQUASHES.

If any of your readers have never tried these varieties they will never regret sending for a package of the seed to Gregory next spring. Turban is good for custard pies any time after it is large enough. We never use Cymitons or any other summer squash; the Turban takes the place of them all, and of egg-plant also. I have nine kinds of squash on tread. Will report in time.

OF MELLONS,

the rabbits took all except Hardy Ridge. They eat even the vines. One seed of this variety, protected, gave four at one picking averaging 12¼ pounds each. They are good, but not best. Of watermelons, New German comes first; is quite early, but white core; not very good. Ghinney next; good and tender. Peerless, larger and later; the best in quality; rind too thick. Mountain sweet, late, large and fine.

We have plenty of water for irrigation, and it would be in order now to plow for and sow

ALFALFA,

if I had time. What a county for this crop. The hay sells for $4 per ton in the field, and $5 in the stack. Never saw such a place as this for

CORN.

Some planted July 10th has suckers six and eight feet high; that planted early, two and sometimes three ears to the stalk. With those two crops (a barley crop before the corn and pumpkin crop with it), a farmer ought to make a good living here with half the labor required in the East; also at raising pork, which readily sells for six cents a pound on foot; and with a new country and new mines being continually developed, there is not much danger of over-stocking the market. We like

THE CLIMATE.

The only thing we have to complain of is some chills and fever, but we have less of other kinds of sickness, and after over a year's experience I am only inclined to regret the cry of ague kept me away from here so long, and out on the Tulare plains fighting grasshoppers. Now we can bud and graft without a fear of the trees going off with wings. I may have a few facts about my neighbors' fruit trees for next letter.

Yours, I. B. RUMFORD.

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158 Acres 8 miles from San Jose; house, barn and outbuildings; 15 acres in grapes, balance good cultivation; running stream of water for five months in the year. $6,120; one-third cash, balance in one and two years at 10 per annum.

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60 Acres of as fine land as can be found in the county, with fine improvement. Will sell it cheap for within next 90 days; must be sold in that time. Situate one mile from Lawrence Station, S. P. R. R.

18 Acres fine Vegetable Land, 3 miles southeast of San Jose, on east side of Tully Road; has a Dwelling of 6 rooms (two-story house), Barn, etc. Orchard and Vineyard of 7 acres; Cows, Wagons, Farming Implements, etc. Price of whole, $4,900.

1,000 Acres of fine Grain and Fruit Land, located near Los Gatos; will be sold in tracts to suit at from 40 to 1000 acres. Terms easy; prices low; must be sold within 90 days.

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108 Acres land on San Jose and Santa Cruz road, near Los Gatos, 5 miles from San Jose; 2 acres fruit trees; and well fenced. Everything improvements consist of a dwelling which cost $2,000, a good barn, also orchard and vineyard, good well, wind mill and large tank. Terms, ⅓ cash, balance on time. Price, $35 per acre.

88 Acres fine land 6 miles west of San Jose, near Lawrence Station; well improved. Price, $100 per acre, on reasonable terms.

290 Acres 5 miles west of Gilroy; 90 acres vineyard, 10 acres orchard, all kinds of fruits; a living stream of water all under fence, has a good house, barn and other out-buildings, wine cellars. Terms easy. Price, $10,000.

Stock farm of 2,000 acres, enclosed with brush fence and natural boundaries, located about 10 miles east of the 18-mile house, near Bennett's stock farm; well improved; has a good dwelling, barn, corrals, etc.; 80 head of American cattle, 15 of which are cows, balance one and two year olds. Terms easy. Price, $14,000.

42 31 100 Acres land on the road Guadalupe Mines, near the Los Gatos road, adjoining lands of F. Richmond. Terms easy. Price, $3,000.

242 Acres fine land, near San Jose; will be sold on a long credit. $6,000 cash, balance on 6 years, equal annual payments, with interest at 10 per cent per annum.

200 Acres of excellent fruit and berry land near Santa Clara depot. Price per acre, $200.

200 Acres in Alameda county, on west side of county road leading to Oakland, about one mile from Warm Springs, near Mission San Jose. It is fine black loam soil, well fenced. Has a good house and barn, etc. Price, $80 per acre; one-fourth cash; balance in one, two and three years, approved paper bearing one per cent. interest.

500 Acres of extra fine grain land 5 miles southwest of Watsonville and 1½ miles from shipping point, will yield 40 to 60 bushels per acre. Terms to suit purchasers. Price, $40 per acre.

160 Acres of pre-emption claim 35 miles southwest of Salinas City, 10 miles west of railroad terminus. Small house, good fence, out-houses, etc.; with an outside range of 800 acres, all finely watered. This is one of the finest bay ranches to be found in the country. Price, $1000; or will exchange for San Jose property.

160 Acres of fine timbered land located just on the line between Santa Clara and Santa Cruz counties. No piece of property on Santa Cruz mountains to excel it. Price, $6,000.

120 Acres fine land adjoining village of Saratoga; enclosed; title perfect. Price per acre, $50. Also, a farm of 160 acres 1½ miles south of Saratoga; good dwelling, barn, orchard and vineyard. Price, $4000.

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BUSINESS COLLEGE.

A Day and Boarding School for Both Sexes.

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In acknowledging the kindness of the patrons of this School, the Proprietors desire to assure them that with the increased patronage will be added increased facilities for imparting instruction. They intend that the School shall offer the very best opportunities for acquiring thorough education, both theoretical and practical.

The course of study in the Academic grade is extensive and thorough.

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Students from a distance will find pleasant rooms and board at reasonable prices at the boarding-house.

The Faculty accept to its fullest extent the growing demand of the industrial classes for recognition in the public educational system, hailing it as the harbinger of a higher and better civilization.

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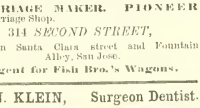

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Passengers for Chicago, Niagara Falls, Pittsburg, Philadelphia, Montreal, Quebec, New York Boston, or any point East, should buy their trans-continental tickets via the pioneer route,

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This is the Best route East. Its Track is of Steel Rails, and on it has been made the Fastest time that has ever been made in this country. By this route passengers for points east of Chicago have choice of the following lines from Chicago:

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This is the Shortest, Best, and only line running Pullman celebrated Palace sleeping cars and coaches, connecting with Union Pacific Railroad at Omaha and from the West, via Grand Junction, Marshall, Cedar Rapids, Clinton, Sterling and Dixon, for Chicago and the East.

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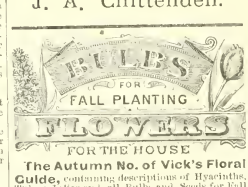

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Reduced to Live and Let Live Prices.

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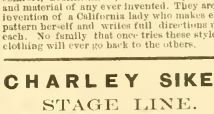

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IMPROVE, STRENGTHEN, and Preserve the Sight.

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Cemetery Work

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BOOTS AND SHOES.

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VOL. 7 CALIFORNIA No 11

AGRICULTURIST

AND

LIVE STOCK JOURNAL

A HOUSEHOLD MAGAZINE.

A RURAL MONTHLY FOR IN-DOORS AND OUT.

1876

NOVEMBER.

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The California Agriculturist

AND

LIVE STOCK JOURNAL.

Vol. 7--No. 11.} SAN JOSE AND SAN FRANCISCO, CAL., NOVEMBER, 1876. {SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

City Gardening.

SUGGESTIONS FOR NOVEMBER.

We quote from the San Francisco *California Horticulturist* some hints on work for November, which are written by a practical gardener:

"The flower garden has its worst time during November; flowers are then becoming very scarce, and florists have difficulty in procuring sufficient for their customers, though every year this want is becoming less and less, owing to new plants being brought into notice, and a more thorough knowledge being obtained by those in the business, to supply the wants of flower amateurs. Shrubs and trees should now receive a thorough pruning. After the first rains the ground should receive a good top-dressing of manure, and after that a thorough spading. Whatever is to be transplanted should be done at this time.

Dahlias are better out of the ground, and stored away in a dry, cool room.

Greenhouse plants should be watered carefully. Gardeners and others are apt to give too much water during the fall and winter months.

Cineraries, Cyclamens, and Chinese Primroses should receive the attention of florists, in order to have them in bloom at the beginning of January. The best place for them is close under glass. Cinerarias may have plenty of water, if a warm and sunny exposure can be given. Primroses and Cyclamens do better in a partially shaded position.

Camellias require abundance of water as their flowering season approaches.

All kinds of seeds of greenhouse plants and evergreens may be sown in boxes and pots as soon as they ripen. It is much better for seeds to be put in the ground than to lie upon the shelves, especially as without resorting to artificial heat, the autumn and winter months with us are generally more favorable for the germination of seeds under glass.

Hyacinths can safely be planted for greenhouse and window culture. After potting, place them in a dark room for a week or two, and allow them to form roots before the leaves make their appearance.

The vines in graperies must be kept very dry and airy."

To the above we will add a few words. Prune away and clean up all old stalks, dead leaves and rubbish, so that your garden will look neat. Protect all healthy-looking tender plants from frost by covering over with paper, cloth or boxes on cold nights. Don't allow the Calla lilies to get nipped. It will pay to be particular with them. Make a light, ornamental frame out of lathing to hold the covering. You need not remove the frame; if painted green it will look neat. The covering should be put on at night and removed after the air is temperate—an hour or so after sunrise.

Now is a good time to transplant violets and all early-blooming, hardy perennials. If watering is required, apply in the morning, as watering at night in cold weather is likely to chill the plants.

Now is a good season to stir the soil. After a light spading and pulverizing, spread a thick coating of manure on the surface of beds, and cover the manure with an inch or more of sand. This gives a neat appearance, and is much better for the soil than clear manure. In fact, the very best surface dressing is manure and sand. The sand on top, during the rainy season, by keeping the manure constantly moist, facilitates its decay and prepares it for plant-food, so that when the bed is spaded in February it will be in the best possible condition.

Procure gravel for walks now, before the heavy rains. Shelter all tender plants against beating winds, rains and frost, and you will be well repaid for all trouble.—[Ed. Agr.

WINTER IRRIGATION.

In many portions of California the soil is deep and retentive of moisture, and if once filled with moisture will, without late rains, hold enough in store to supply the growth of a crop of grain, hay, or in fact any crop that does not require an extra abundance of water. An abundance of rain during the rainy season, to fill the soil, will always bring full crops upon such lands. Without the abundant rain to fill the soil, if not irrigated, short crops or an entire failure is sure to result. As our rains are so uncertain, and dry years are so frequent, it becomes a matter of serious import to farmers situated upon such uplands to provide against the possibility of failure. It is a matter of "life or death" with them, in a business point of view. While these lands are generally beyond the reach of summer irrigation from streams of running water, they are usually in reach of water courses that in winter almost always run enough to completely flood the lands were it conducted upon them. That it will pay for farmers to combine together, and take out and utilize the waters that run to waste during the winter, any one can convince himself of by sitting down and figuring upon the costs and profits. It is very seldom that there is enough moisture stored in the soil to produce a full crop. There is not one season in ten that a good soaking of the soil would not be a benefit. The creeks in winter are always supplied with surface washings of hills, and the water is filled with rich, fertilizing matters that, if spread upon the soil, will enrich it more than full cropping will exhaust, so that lands winter-irrigated will constantly increase in fertility and the crops be greatly multiplied. If the value of winter irrigation was properly understood, no farmer who could possibly make use of it would rest content until he applied it to his lands: there would be a general co-operation among farmers to secure the benefits at once, instead of the lethargy and the standing in each other's way so often seen in neighborhoods at the present time. We know of instances where the perverseness of some men prevents the developing of measures that would greatly benefit all, and double the productive capacity and value of farms. This matter of winter irrigation should enlist the action of clubs and Grangers wherever co-operation is necessary to secure it. A few examples in a county would arouse all the people in earnest to an appreciation of its value. Our laws should be so modeled that every landowner can demand as his right a just proportion of the waters that naturally belong to it, and no one should prevent him from reaching such stream by the direction approved by the surveyor. The lands and streams should be surveyed and mapped off, showing the limits of the lands each stream is allowed to irrigate, and the district should be associated for mutual work and agreement. This, with suitable provisions of law for local action and government, would be a foundation for such improvement as the enlightenment and enterprise of the people of each district might demand. No farmer of experience and observation will dispute for a moment that great benefit may result from thorough winter irrigation. The land soaked one winter will, with ordinary rains, bring two good crops, as a portion of the moisture is carried over from the first to the second year. Often when there is nearly rain enough to bring a crop, even a partial wetting by irrigation would supply the balance necessary to insure success. At any rate, a proper system once adopted, the dams and ditches once made, the further expense and trouble would be but light, while the results would be grand and surprising to all but such as have fully realized the advantages of such a system. We might enumerate instances where heavy crops were grown from land soaked in winter, while alongside, on equally good soil, there was an entire failure from drouth. But such instances, on a small scale at least, are familiar to every practical farmer on this coast. No argument is necessary to prove the value of winter irrigation. Only a little united action is required to secure its general benefits.

Raisin-making has been shown from time to time to be much more profitable and respectable than wine-making. While grapes for wine have this year sold for $10 per ton, raisin grapes pay a profit on $50 per ton for curing into raisins. And still there are grape-growers who pretend to despise the California Agriculturist for daring to call into question either the profit or the morality of wine making. The fact that their vineyards are generally mortgaged, and they cannot sell wine for enough to pay the cost of the casks in which it is stored, is as nothing compared to the delusion of phantom wealth they expect to see metamorphosed into a reality. They, too, often spoil their manhood trying to save their wine by drinking it. We pity the poor wine-bigot who cannot see, or that will not listen to truthful advice. And, however much enmity we incur, we propose to continue to give expression to our honest convictions.

BEE-KEEPING IN SOUTHERN CALIFORNIA.

BY OUR REGULAR CORRESPONDENT.

Ed. Agriculturist:—There is little to write about in regard to the busy bee, at this time. Nearly all apiarists have cleaned up, and will have but little care or trouble with the apiary till the swarming season comes again. But the careful apiarist will not allow a day to pass that he does not walk through the apiary. A glance will tell him if all is right. How different this from the Eastern States, where *now* the care and anxiety really commences. To winter safely, requires more labor and more devices than we need to run an apiary the year round, notwithstanding the fact that the moth has twelve months in the year in which to depredate. The best remedy for the above mentioned pests that I have found is to keep the colonies of bees strong.

We have a Bee-Keepers' Association, from which great things are expected in the future, it having organized so late in the season that little can be expected of it this year. And here I wish to say I think they have made a serious mistake in organizing as they have; not that they have not good officers, but they had it in their power to elect a gentleman as President who, from a lifelong experience in the apiary, and in the sale of the product of the same, is pre-eminently fitted for the situation, and the Association would have derived great strength and prestige from putting him in that place, and would have honored *itself* more than *him*, and justly recognize their obligations to the originator of the industry on this coast, and would have as their leader the largest owner of bees on this continent.

This morning I was at work in some willows that fringe the margin of a stream near my apiary, and hearing a familiar sound, I looked to see if my ear deceived me; but no, sure enough there was a large swarm in the air, which soon clustered. I examined and found a fine-looking queen, and thinking them worthy, I soon had them in a good hive, and I gave them a lift in the way of a couple of sheets of honey, which sent them to housekeeping rejoicing. I mention this simply on account of being out of season. Jas.

San Bernardino, Oct. 7, 1876.

Ever since this magazine was published we have advocated making a good use of the grape, and have advocated planting vines to produce feed for animals. It will pay on land too dry to produce alfalfa or other succulent feed in abundance. Upland farms, grain farms, can produce enough grapes to feed and fatten, in connection with grain, a good many hogs every year, at almost no cost at all. The hogs will harvest the crop themselves, and the pork produced will bring better returns to the farmer than grain in sacks. Every upland farmer should plant vines for this purpose.

California AGRICULTURIST AND Live Stock Journal.

$1.50 Per Annum.

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CAL. AGRICULTURIST PUB. CO.

S. HARRIS HERRING, Editor.

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Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

Occasionally a person to whom we have sent the AGRICULTURIST—is behind in his payment, and orders the paper stopped without paying his dues. Of course no honest person will be guilty of so mean an act. Such will we shall place in the hands of suitable persons for collection, and we shall not hesitate to expose all such dishonest delinquents.

New Work on Grape Culture.—We have received from A. L. Bancroft & Co., San Francisco, a volume devoted to grape culture, written and compiled by T. Hart Hyatt. It is a revision of the work by the same author which appeared some ten years ago, and, in a very condensed form, includes a good deal of practical information upon grape culture in California. In some respects it is not as complete as we could desire, but it is worthy of the patronage of the people.

Persons who receive the CALIFORNIA AGRICULTURIST on trial, are especially requested to examine it on its own merits. If you like the magazine and think it cheap enough at $1 50 a year, please order it sent regularly to your address. If you don't want it we would be glad we have no desire to force you to take it. We simply wish every one now acquainted with the journal to see it for themselves, for we know that among all the people there are a goodly number who will find it just suited to their wants.

Steadily our list increases. This month we print 9,000 copies of the CALIFORNIA AGRICULTURIST. We don't want a single subscriber to "go back on us" now. Send in your subscriptions, and continue the best, cheapest, most independent and practical agricultural and household journal in California, and you will never regret it. The next volume will in many respects surpass in worth and attractiveness any of past issue. Send in you renewals, accompanied with the new subscriptions of friends, wherever possible.

The Santa Clara Echo has changed hands within the past month, E. R. Painter, formerly of Colorado, taking charge. The present proprietor has had considerable experience both as a publisher and printer, and brings with him high testimonials from his former home. We are assured no pains will be spared to make the Echo a first-class local and general newspaper, such a one as will be a necessity to every reading man, woman and child in Santa Clara and vicinity. Send your address to the publisher for a specimen copy and be convinced of what we say.

Ordering Frames.—Persons ordering frames for pictures would do well to associate together and order several. It will cost no more by express, or little more, to send a package of several than it would to send one. Send us your orders and we will return estimate of cost; then when we receive the money the frames will be made and returned to you as soon as possible. Should you wish pictures mounted and varnished we will do that also. But any one can do this at home if he will follow directions given elsewhere, and save one-half the expense.

No notice will be paid to returned papers unless there is written upon them the postoffice address of the person returning, so that we can know from what postoffice, as well as from what name, the papers are returned. As the names of subscribers are arranged in our books by postoffices, we cannot know where a paper comes from without the postoffice address. The proper way to do when you wish to stop a paper is to write to the publisher, settle up to date, and order the paper stopped. If it still comes, get the postmaster to notify the publisher, and further responsibility on your part will cease.

Santa Clara Diet Bread.—M. Frank Kingston, the proprietor of the famous Santa Clara Cracker Factory, is making the very best diet bread in the world It is made from pure, unbolted wheat flour, with no grease, no leaven to deteriorate its nutritive purity. These crackers are put up in large or small packages to order, and are sold at only $7 per hundred pounds. This is cheaper than any other first-class cracker made at any other factory. Invalids and healthy people who want a real good diet bread should obtain some at once. We know that they are unsurpassed for excellence, as we are using them in our own family. We speak this gratuitous word for the benefit of our friends.

The subject of co-operation is one that appears to be enlisting more and more the attention and sympathies of the industrial masses. This we are very glad to notice. The more that neighbors co-operate together in getting fine stock to improve what they already have; to procure machinery to put in and harvest crops; to obtain fair prices for their produce, and to provide themselves with necessary stores for consumption at wholesale rates, the better for all concerned. Co-operation on a small scale, and on a large scale, will pay all the time. Our common schools are co operative under the law. The law of human love and kindness should lead neighbors to study each other's good as well as their own.

Frames for Pictures.—Our Santa Cruz correspondent, and others, have inquired as to the price of picture frames. Unless we have the dimensions of the picture to be framed, and know the style of frame wanted, we can give no estimate. But to such as desire our aid we can offer very nearly wholesale rates. We have made arrangements with frame manufacturers so that we can offer the following figures on frames for the "Gypsy Girl," 12x16 inches (persons ordering to pay transportation from San Jose): 1½-inch oiled walnut moulding with half inch gilt lining, 65 cents; 1½-inch oiled walnut moulding with one inch gilt lining, $1; 2-inch gilt moulding frame, 80 cents. The frames are solidly made, nailed and glued. We might offer lower prices on inferior frames, but will send out none but first-class ones. These rates are only one half (or less) than what dealers ask Persons ordering frames through us for any size or style of pictures, will get them proportionately low. We will be glad to serve all subscribers without pay for our trouble.

Pay in Advance.—There are two ways of running a paper. One is on the plan of prepayment, notifying the subscriber when his time is up and stopping unless ordered to continue; the other is to keep on sending and trust the subscriber, unless he orders it discontinued. The first cuts off a good many who would continue, and who would like to continue, but neglect to go to the trouble just then to attend to the matter. The latter hangs on to a good many who intend never to pay at all, and who think it is legitimate to swindle a publisher out of his just dues. We have always aimed to notify our subscribers when their time was up, with the request that they would order the paper stopped if they did not wish to continue. We have now concluded to come down to the bed-rock principle, and discontinue, after notifying, all such as do not pay in advance. We will then know how we stand, at any rate, and our subscribers will know what to depend upon. Hereafter our terms will be either a promise to pay within a limited time, or pay in advance.

The intelligent masses of the working, producing people, want a paper that is thoroughly independent to the backbone; that courts no favors from leading men in any position, whether in politics or out of politics, in the grange or out of it, in rings or out of rings, whether monopolists or anti monopolists; a paper devoted purely and singly to the best interests of the people to whom it goes, one whose sole aim is to be right; that fearlessly works for principle from motives of principle. He who is sure that his paper may be truly classed in this list will most likely stand by it, even should he in some respects differ in opinion from its editor. An independent editor doesn't try to agree with everybody; he only tries to be agreeable, through motives of tolerance and justice, and to stick to the right just because it is right, believing this is the best in policy as in principle. The AGRICULTURIST is the people's paper, if such an one exists or ever existed. We invite the most radical expression upon all subjects affecting the interests of the producing classes. We propose to work for the advancement of every worthy person and enterprise, and oppose every evil that grows out of the selfishness, greed and monopolizing disposition of men. We want the subscriptions of honest and earnest workers everywhere, and are determined to deserve, by our efforts, a wider field and stronger support.

Home Improvement and Home Enjoyment.—The season for selecting such periodicals as are desired for the coming year, is at hand. Every family needs several papers and magazines to give them the variety of choice reading that intelligent minds require in our age of civilization. The education of a growing-up family is aided by a supply of fresh, interesting and useful reading more than in any other way the investment of an equal amount will bring. Young folks are steadier, and less inclined to seek entertainment away from home, when they are supplied with the best periodical literature. There is more real, enlightened enjoyment, in homes where such reading matter is plenty. Every one of the family is benefitted. The social home circle is always enlivened by the arrival of the mail, which is looked forward to with something of expectation that gives a zest to home enjoyments. Don't fail to supply yourself with good reading matter, and, if it suits you, please include the CALIFORNIA AGRICULTURIST in your list.

San Jose Alden-Preserved Prunes. Mr. C. T. Settle, the Superintendent of the Alden Fruit-Preserving Company, informs us that they have this season converted forty-five tons of fresh prunes into fifteen tons of very excellent dried fruit, worth $280 per ton. The cost of fresh prunes at the factory was $1 50 per hundred pounds. These forty-five tons were produced on about ten acres of land, about 9,000 pounds per acre. This, at the low price of $1 50 per hundred pounds, is $135 per acre for the fruit, which pays very well these times. The cost of gathering prunes is less than any other fruit-crop. Straw or sheets are spread under the trees, and the ripe fruit is shaken off and picked up into boxes and taken to the factory, at no greater cost than gathering up so many potatoes, already dug. The market for fresh prunes in the Eastern States is good, and all the finest, above supplying the home market, are shipped in refrigerator cars in a fresh condition. They keep so well that they may be even safely transported in good order in ordinary cars. The Eastern market for cured prunes is mostly supplied by Europe, from whose ports immense quantities are sent to New York, and sometimes sold as low as $5 the hundred pounds, after paying a 15 per cent. duty. The fact that we have to compete with European prunes at such low rates is worthy of consideration, and would seem to restrict our production of cured prunes to our home market. Still it is thought that the superior quality of our California prunes, cured by the Alden process, will demand an advance over the imported prunes sufficient to encourage the business. If prunes can be produced in Southern Europe so cheaply, why cannot they be here also, where soil and climate are so favorable? At any rate, so far, our orchardists have seen no cause for alarm. The demand, at paying prices, is likely to increase with the supply for many years to come, at least.

Poisoning Squirrels.—Mr. W. H. Ware, a large grain farmer near San Jose, has had a good deal of experience in poisoning squirrels, and has been quite successful. His method this year is to poison sweet apples, which the squirrels are very fond of. The apples are cut across from side to side (not from stem to calex) two-thirds the dis-

tance through; then held open with thumb and finger, and what strychnine will rest upon the point of a penknife blade is put into the center and the halves pressed together. The poison permeates all through the apple. The apple is then rolled into a squirrel hole, out of the reach of all live stock, and the work is done. The squirrels will eat and die. Mr. Ware likes this method better than using melons, poisoned. Birds and other animals are likely to eat of the melons, while the squirrels are not so sure to eat of them as of apples. Squirrels like apples at any season of the year, but most when there is no other succulent food, say in September and October. After the grain starts to grow and there is plenty of green feed, Mr. W. finds that squirrels like dry feed best, such as grain. The way he prepares this is to dissolve phosphorus by pouring hot water upon it, and with sugar or molasses and flour, make a thin batter, and pour this batter upon wheat, stirring till each kernel is coated. One stick of phosphorus needs two quarts of hot water, with a handful of sugar and enough flour to make a thin batter. Don't set the phosphorus in water upon the hot stove to melt, but melt it by pouring hot water upon it, in some suitable vessel. There is but one objection to phosphorus. It kills every rodent that eats it, but when they eat but little it acts slowly, and they are sometimes several days dying. Strychnine acts quicker, but is much more expensive. If squirrels poisoned with phosphorus die where hogs can eat them the hogs will be poisoned also. Poisoned grain should be put well into the holes, out of the reach of other animals. When one kind of poison fails of making clean work, try another, and you will in the end be successful.

Poetry.

Virgil's Georgics Rendered into English Verse.

BY PROF. W. H. WYNN.

TIME TO PLOW.

In early spring when from the hoary hills,
The snow dissolves in percolating rills,
And crumbling fallows to the zephyrs yield
The curling compost of the genial field,
Then to the plow I yoke my sturdy steer,
And pressing hard drive deep the glittering share.
That field repays the eager farmer most,
Which twice has felt the sun and twice the frost;
His crowded barns will burst with burdened grain,
Who three times plows and still will plow again.

QUALITIES OF SOIL TO BE LEARNED.

But ere we break the soil we're not know,
'Twere well to ask the winds which way they blow;
The varying tempers of the sky discern,
And modes of culture from our fathers learn:
What tillage suits the habits of the soil,
In what way each rewards the farmer's toil:
For kinds of soil discriminate must grow,
Here grain, there grapes, are best disposed to grow,
This thriving trees to nurseryman will bring,
In that all herbs spontaneously spring.
See how Mt. Timolus saffron odors sends,
In rich supply to earth's remotest ends;
How ivory the wealth of India wields;
And frankincense the soft Sabaean yields;
Nude Chalybs expert in iron works grow,
Epirus fruitful in Olympic mares;
And where on Pontus best the beaver breeds,
Strong-scented castor for the druggist's needs.
These laws and special aptitudes unmixed,
Wise nature bath on certain places fixed,
What time Deucalion from Parnassus hurled
The lifeless stones into a lifeless world,
His mother's bones, as was the prophet's ken,
And forthwith sprang a hardy race of men.
Come, then, your steers, in early season hitch,
And turn the soil if it be deep and rich,
That dusty summer coming on may make
Maturer sums the scattered clods to bake.
But if the soil you plow be thin and light,
'Twere best to make the furrow also slight,
What time you see in the autumnal skies
Arcturus, harbinger of tempests, rise;—
The latter, lest the scanty moisture leave
The sandy soil as running through a sieve.

ROTATION OF CROPS.

Likewise your lands when reapt of harvests clear,
Should fallow lie through each alternate year;
The soil exhausted by the crop it grows,
Demands an equal season of repose,
When hardening 'neath the matted swaed it brings,
From secret sources new and living springs:
Or, with the season, you the crop should change,
And in succession for repair arrange.
The yellow wheat you will not fail to sow
This year, where last the rustling pulse did grow;
The slender offspring of the vetch replace,
The bitter lupine's brittle stalks apace.
These crops of pede the soil to reinstate,
With waving wheatfields best may alternate.
But choose not to effect the favoring turn,
With flax or oats, for those the soil will burn;
Nor yet the poppy, steeped in Lethean glooms,
For it the virtue of the soil consumes;
But if to these the alternate years must fall,
You may with ease to profit turn them all,
If only you will not withhold to cure
The impoverished soil with loads of rich manure,
Nor spare to scatter with a liberal hand
The sordid ashes on the worn-out land.
Thus change of crop the needed rest supplies
The same as when the ground in fallow lies.

The Owd Wooden Plough.

We make no apology, says the London (Eng.) Farmer, for printing thus prominently a song which is still popular among the farmers of certain districts in Derbyshire and Staffordshire. It comes to us through a correspondent who has notions very far ahead of the "owd wooden plough." Our correspondent thinks it is quite time that "wooden"-ness should be got out of the heads of all farmers:

TH' OWD WOODEN PLOUGH.

Up by th' Blake mere o' Merridge, not a long time ago,
There lived an old chap wi' an old wig o' tow,
His name wor Tom Morris, and I'll tell ye how
He made a discourse on an old wooden plough.
Gee ho Dobbin, gee ho Dobbin,
Gee ho Dobbin, gees up and gee wo.

Twor the tenth of October, and the oats wor just ripe,
On the settle he sot, and he smoked his long pipe;
And he thought a long time about this thing and that,
And said, "Tommy, sit down, and I'll tell thee what's what."
Gee ho Dobbin, &c

"These are terrible times, lad; I prithee draw nigh,
And I'll give thee a wringle or two ere I dis;
I can't stand it much longer, it shortens my breath,
These new-fangled notions will soen be my death.
Gee ho Dobbin, &c.

"They're going too fast, lad, I tell thee, a deal;
There's Lord Talbort, o' Ingestre, and Ralph Sneyd, o' Keele,
And Sandon, and Buller, and Mainwaring, and Bill—
Lord! the stuff they've been talking—it makes me quite ill.
Gee ho Dobbin, &c.

"Wi' their bones and their acids, their drills and guhanner,
Thy grandfather, Tom, never farmed i' that manner;
He'd ha' stared hard enough if he'd heard what they say
About boiling o' oil cakes and chopping o' hay.
Gee ho Dobbin, &c.

"Then soughing's a thing as in course they mun hotter,
So the go s mon's depth to get at th' top water,
And they scoop out the dirt wi' a thing like a spoon,
And for tiles they'll he using o' baccy-pipes soon.
Gee ho Dobbin, &c.

"Then they prate o' their carrots, and mangles, and sich,
(As if growin' o' carrots would mak's men rich)
Or hoeing o' turnits and cleaning o' yallows—
Stuff and nonsense!—and growing of wheat without fallows.
Gee ho Dobbin, &c.

"Why, it makes me to laugh; without fallows, indeed—
I think they mun ha' a soft place in their jed,
And what dun ye think they've been doing just now?
Why, they've got up a laugh at an owd wooden plough!
Gee ho Dobbin, &c.

"Aye, an owd wooden plough; and they say, to be sure,
As the wide-awake farmers mun see 'em no more;
They mun all be of iron, and wood there's no trade for;
Why, what do fools thinken as ash trees were made for.
Gee ho Dobbin, &c.

"Talk o' ploughs made o' iron! why, th' next thing they'll do,
As sure as you live, they'll be painting them blue;
Then they've two tits abreast as they call a gee hue;
They may call long enough, but it never can go.
Gee ho Dobbin, &c.

"No! gi'e me a good wooden plough as is strong,
And a good pair o' big sheuls to help it along,
And four long-tailed tits, a mon, and a lad,
And a good steady pace, and it shanner be bad.
Gee ho Dobbin, &c.

Then Tommy, my lad, never heed what they say,
But get thee on still i' thy forther's owd way,
They'll bring all their hogs to fine markets I know,
But stick, while thee lives, to the old wooden plough."
Gee ho Dobbin, &c.

Autumn.

I wonder if oak and maple,
Willow and elm and all,
Are stirred at heart by the coming
Of the dey that lives but fall;
Do they think of the yellow whirlwind,
Or of the crimson spray,
That shall be when the chill November
Bears all the leaves away?

"If die we must," the leaflets
Seem one by one to say:
"We will wear the colors of all the earth
Until we pass away.
No eyes shall see us falter;
And before we lay it down
We'll wear in sight of all the earth
The year's most kingly crown.

So, trees of the stately forest,
And trees by the meadow way,
You are kindling into glory
This soft autumnal day.
And we who prize remember
That more than all they lost
To hearts and trees together
May come through ripening frost.

A Song of the Country.

BY JOHN STUART BLACKIE.

Away from the roar and the rattle,
The dust and the din of the town,
Where to live is to brawl and to battle,
Till the strong treads the weak man down!
Away to the bonnie green hills
Where the sunshine sleeps on the brae,
And the heart of the greenwood thrills
To the hymn of the bird on the spray.

Away from the smoke and the smother,
The veil of the dun and the brown,
The push and the plash and the pother,
The wear and the waste of the town!
Away where the sky shines clear,
And the light breeze wanders at will,
And the dark pine-wood nods near
To the light-plumed birch on the hill.

Away from the whirling and wheeling,
And cleaning above and below,
Where the heart has no leisure for feeling
And the thought has no quiet to grow.
Away where the clear brook purls,
And the hyacinth droops in the shade,
And the plume of the fern uncurls
Its grace in the depth of the glade.

Away to the cottage so sweetly
Embowered 'neath the fringe of the wood,
Where the wife of my bosom shall meet me
With thoughts ever kindly and good;
More dear than the wealth of the world,
Fond pledges with bairnies three,
And the plump-armed babe that has curled
Its lips sweetly pouting for me.

Then away from the roar and the rattle
The dust and the din of the town,
Where to live is to brawl and to battle,
Till the strong treads the weak man down.
Away where the green twigs nod,
In the fragrant breath of May,
And the sweet growth spreads on the sod,
And the blithe birds sing on the spray.
—Sunday Magazine.

Thanksgiving.

The harvest is over; let the farm bell and church bell,
From valley and hill top the tidings proclaim,
Till the air shall be laden with notes of thanksgiving,
And the mountains shall echo the good giver's name.

Throw open the doors of the farmer's great mansion,
And landlord and laborer draw near to the board,
Where fair hands have scattered in tasteful profusion,
The viands the choicest the farm can afford.

And feasting and jest and the half forgot story
And bumper and song for a season have sway,
For the hands chained to toil are for once liberated,
And heart strange to freedom are free for the day.

Let the swains, browned with sun, and with hands hard from labor,
To the shadowy grove with the maid-mates repair;
And bring with them jewels from grain field and meadow,
To set in the crown that the fairest shall wear.

The wheat plume, and oat plume, and sedge and clover blossom,
And sprays of soft meadow-grass showing the green,
Oh, weave them in chaplets, their colors contrasting
The green with the gold, and the gold with the green.

And out of the throng of the brown rustic faces
Let the maidens choose him who was true to the soil,
Whose courage failed not when the battle was
Whose hands are the hardest and broadest from toil.

And to him the choice of the purest and fairest
And here the honor the chaplet to wear,
Oh, tenderly place it upon her fair forehead,
And let it rest lightly upon her dark hair.

And thus clad in beauty, her tresses the shadow
The cut plume the sunshine enlivened with green,
Let the woodland resound with answering echo
Of their "Queen of Beauty" and their "Harvest Queen."

And the dear little children, Oh, tell them to,
Shall take turns at the old iron ball,
And let them take turns at the old iron ball,
Till stroke answer stroke, and the spirit of mirth
Shall wake their sweet laughter from wood-land and dell.

Oh tell it ye bells, till it reaches the city,
Ye quivering wires swift bear it away;
And whisper the word to the indigent millions
And cheer them with hope of a happier day.

For the harvest is full and the great barns are bursting,
Let a million of voices the glad news proclaim
Till the air shall be vocal with songs of thanksgiving,
And the mountains shall echo the good Giver name.

S. B. RUSSELL

Seedtime and Harvest.

As you look on your bounteous harvest,
Give thanks and remember the poor;
A little will bring hope and comfort
And gladness to many a door.
The widow who toils with her needle
To give little children their bread,
The neighbor so sad, empty-handed—
On these let your blessing be shed.

And last, but not least, in your plenty
Remember your work-mates as well—
The patient dumb beast, who so silent
No words of complaining can tell.
And, wider, the circle let number
God's creatures in wood and in field—
'Tis little they ask of your bounty
Out of the harvest yield.

The sheaf of grain when the winter
Is white with the blinding snow,
And weary and faint in the darkness
The little ones come and go*
As they give in the Frosty Northland,
Where the sun is dim and cold,
When the Christmas days are openin
Over the field and wold.

Spring sun, and rain, and frost time
Have made the earth's good store—
Of all men in your plenty
You should remember the poor;
Let the merchant hoard his treasure—
Let the miser watch his store—
The wealth of the fields is given
To lie at your humble door.

MARTHA READ.

*It is the custom in Norway to put up a sheaf of wheat for the birds in the open air everywhere at Christmas time.

The work of the year, the end, draw th near
And we lay our weapons by;
Late we toiled and long, and dull was our soul
While our throats were parched and dry.

The plow and the hoe to the barn now go,
All bright and worn by the soil,
And we leave them so while our crops do grow
To reward us for our toil.

Sheep and Goats.

THE ANCORA COAT INTEREST IN CALIFORNIA.

BY C. P. BAILEY.

BY many the breeding of Angora goats has been regarded as an adventurous and novel enterprise, engaged in mostly by Californians, who are notably on the alert for something out of the line of everyday investments.

As early as the days of Moses we have record of the use of goats' hair in the construction of the curtains of the tabernacle. From that time to the present the Angora goat has occupied the same country and has been the principal source of wealth to its inhabitants. For many years past England and France have very nearly monopolized the trade in goats' wool or mohair. The city of Bradford, England, is engaged almost exclusively in the manufacture of mohair goods. Several of the factories that started years ago with small capital, have amassed princely fortunes, and now have nearly the whole world for customers.

These valuable animals were first imported to the United States in 1848, and taken to the Southern States; and as there were very few common goats in that country, breeders had to rely almost entirely on the imported stock for increase. This proved too slow and expensive an undertaking for any save a few wealthy men. Two bucks from this first flock were brought to California in 1861, and in 1867 several Angoras, including a number of does, were brought here from a flock imported by a Mr. Cheenery of Boston. Since that time the business has grown steadily and become quite popular, and there have been quite a number of importations of pure bred Angora goats.

In California, and in fact the entire Pacific coast, the Angora has found a home very similar to his native country, and as there were plenty of common goats here, the work of in-breeding has gone rapidly on; and now, only ten years since the first pure bred buck and doe arrived in California, there are over 200,000 grade Angora goats, and we are already commencing to export mohair. Many of the high grade goats are producing as heavy and as fine fleeces as the imported pure breds.

The displays at the Oregon, Nevada and California State Fairs this present year, have been by far the largest and finest ever made in America, and the amount of attention they have received from enterprising business men generally, shows that they are steadily and surely winning their way among the solid industries of our country.

The Jamestown Alpaca Mills at Jamestown, N. Y., and the Farr Wool Mills at Holyoke, Mass., are completing sharply for all the fleece produced on this coast, and are paying from seventy-five cents to one dollar per pound for all fleece over five inches long. They manufacture it into an endless variety of the most elegant patterns of ladies' dress goods.

The Angora Robe and Glove Company of San Jose, Cal., though comparatively a new enterprise, find ready market for all their manufactured goods, and are prepared to purchase all the well-cured goat skins offered them.

From the above facts and figures it is evident that the breeding of Angora goats is destined to continue, and to grow into a prominent, permanent and profitable industry of the Pacific slope.

San Jose, Oct. 20th, 1876.

FINE SPANISH MERINOS.

The very large and finely-developed Spanish merino sheep exhibited at the late County Fair in San Jose by Mr. B. F. Watkins, show favorably for this breed. The only objection that has been urged against the Spanish merino, has been its size. They are said to be inferior for mutton sheep; but such sheep as Mr. W. exhibited seem to refute this idea. They were as large as any shown, excepting one pen of Cotswolds. Certainly the finest wool and highest priced, is long merino wool. Sheep-breeders generally prefer them to any other in California where ranges are broad and often hilly. Such fine sheep would be the very best to cross with the Cotswold to make a perfect mutton sheep, and at the same time one that will produce a fine, long, strong staple of wool. As the ranges become smaller, and as farmers generally get to keeping small flocks, there will be an increased demand for heavy sheep. It will also pay any sheep-owner to obtain the best stock to improve his sheep and increase the quantity and value of his wool product.

LETTER FROM KERN ISLAND.

ED. AGRICULTURIST: I wish I had the last number of your journal before me, but no, it has gone—been loaned out; wish I could subscribe for half a dozen numbers to send around, and keep one on file, or, better, wish *everybody* would subscribe. A lady to whom I took the last number remarked, "Why, it is the best paper I ever saw—so much more in it to read worth reading than in any of my other papers; and the receipts are so good." You hit the nail with that editorial on the cause of hard times, and no hope from either of the principal parties. They are both rich men's parties. When will the working men learn to put up and vote for men who will represent *labor* as well as *capital?*

But I was to tell your readers of Mr. Stine's place, that they may have some idea of what can be done on this Kern Island. Himself and wife came here with almost nothing eight years ago, took up 160 acres pre-emption, and went to work on it, set out willow fence posts which are fine trees now, from which posts enough could be cut to fence more than half a dozen farms; grape vines planted have made a fine arbor; some of the Rose of Peru in the vineyard nine feet apart, I am told produced one hundred pounds of fruit last year to the vine, which sold for six cents per pound. Last winter he grafted many of the mission vines with Muscat and Malaga; some by cleft graft and others by boring a hole in the stock and driving the new cutting in; both did well. From one strawberry plant in the garden there now have an acre. Lawton blackberries do well. Peach trees are large, healthy and vigorous, most of them seedlings, but all producing heavy crops of large fruit. Apricots and nectarines grow to perfection. As to pears, I never saw them do better, the trees breaking down with the crop, and though it has often been stated we could not expect apples to do well in this warm climate, his place proves this a mistaken idea, for they do as well as in Pennsylvania or New Jersey, the same old kinds. I ate an early harvest apple there, that by its flavor, carried me right back to Jersey. Plum trees, most of them, have also done well, but on one tree the fruit shriveled when half grown. A few almond trees did well enough last year to show they are at home. Mr. S. cultivates the land between his trees, raising potatoes, pumpkins, horse-radish, beans, tomatoes, pepper, etc. He has a good alfalfa patch, takes horses to pasture, and has plenty of hay, does not waste the manure, but applies it to corn land and thinks this pays. Now I have neglected to mention the figs, walnuts, and the lady's flowers. She delights in the beautiful, and it needs a poet to describe the surroundings of her home.

J. RUMFORD.

October, 1876.

THE RAINFALL.

The following is the rainfall to date, measured by the gauge at the Bank of San Jose:

September 16	.01 inches
" 29	.09 "
Total for September	.10
October 16, 12 M	.25
Total for October	.25
Total for the season	.35

Two days drizzling wet weather threatened serious damage to the ungathered grape crop. But fortunately it cleared up and dried away the wet before the grapes commenced to rot.

Price of Wheat.—It is a safe rule to go on, to hold wheat or other grain for a raise when it is selling below an average price; particularly when there is not an over supply produced. This year all authentic reports agree that there is not an over production for the markets of the world. Two cents per pound is not quite an average price. For the last ten years wheat has averaged over two cents in San Francisco. The late indications of a war between Russia and the balancing powers, over poor, rapacious Turkey, promised a rapid advance in prices. Notwithstanding present fluctuations, it is safe to calculate that wheat will be two cents before the end of six months.

We Fully intended to write up something in reference to the conducting of State and County fairs this month. The gamblers have had it all about their own way this season. When we get cooled down over our disgust for the whole contemptible humbug, we will endeavor to treat upon the subject.

The Statistician, published by L. P. McCarty, San Francisco, we find to be the most reliable book of reference that we get. It is in the form of a neat little book, published monthly, only $2.50 a year. Single copy, 50 cents. It is worthy your examination.

Three Months on Trial.—There are thousands of persons in California who only need to see a few copies, of the CAL. AGRICULTURIST to become subscribers. We want our friends to send us as many names as they can. The following letter from a gentleman in Southern California will show you why we desire to place the paper before the people. It will bring us new subscribers without sending out drummers, who take the lion's share of proceeds;

LABALLENA, OCT, 15th 1876.

CAL. AGRICULTURIST PUB. CO.: *Gentlemen*—Inclosed please fine 10c for the CAL. AGRICULTURIST three months on trial; should prefer the Numbers Oct. Nov. and Dec. I was reading the number for Sept., with which I was much pleased. I like its wholesome straightforward tone. If you keep it up as good, I shall subscribe for the coming year.

Yours Respectfully.

Tools for the Farm.

There is no better way for a farmer to invest a few dollars than by buying a few tools for the farm. Much time and expense can be saved by repairing broken farming tools yourself instead of carring them to a carpenter and paying a high price for a job which perhaps you could have done as well if not better yourself, and at a cost of less than one quarter the price paid for the work. There are many days of leisure in the early part of the winter that you can devote to the overhauling and repairing of the farming tools to be used early in the spring, and have them in prime order when the hurry of spring work begins. Supposing you have a broken rake handle; instead of throwing it away, lay the head by, or if you have an old handle, put that into the good head and you have a whole rake that will last you as long as a new one costing thirty cents. If you break a pitchfork handle, don't buy a whole new fork the next time you go to town, but buy a handle and put the old tine into it and you have as good a fork as can be bought, and for less than half the cost of a new one. Look about your buildings and note the improvement you could make to guard against the cold of the coming winter, both for your family and stock, and you will see that a few dollars expended for a few well selected tools will be a paying investment.

We would suggest the following tools, all of which are first class and can be had for the annexed prices.

1 Cut-off saw	$2 25
1 Rip "	2 50
1 Jack plane	1 25
1 Short jointer	1 50
1 Square	1 75
1 Hammer	1 00
1 Draw shaves	1 25
4 Chisels	3 00
1 Mallet	50
1 Brace	2 00
1 Screw driver	40
1 Oilstone	1 00
2 Gimblets	15
2 Augers 1⅜ and 2 inch	3 00
6 Bits asst'd	4 00
1 Wrench	1 25
Total	$26 80

Probably, if one went with the cash in hand, the tools could be got for $25,00 or by taking a cheaper grade, for $20,00. With what are enumerated above, a man could make anything from a house down, while nothing that needed repairing on the farm in the way of woodwork need be taken away, and in all probability the value of the tools could be saved inside of two years. It will pay you all, *well*, to make the investment, especially if you have any boys old enough to learn. Let them use them, directing their efforts at first, yourself. By a little showing they will soon learn to handle tools skillfully, and gain a knowledge that may be as useful to them in after years as farming itself. Encourage the boys. Don't catch them by the coat collar and jerk their breaths away if you happen to find them "fussing" to make a trap for rabbits, chickens or the like, but speak kindly and show your interest in their welfare by "lending a hand to help them."—EX.

ARREARS.—Subscribers who are in arrears are reminded that this is the season when a farmer can pay up and should do so. As our circulation increases so do our expenses. Send along your arrearages and subscribe for 1877. Send the amount at once, and a new subscriber for the coming year. It is expensive to send out agents, and we cannot afford to do it. Whether you get bills or not, please remember us.

Horticulture.

BEST FRUITS FOR AN ORCHARD.

A LIST of the best varieties of fruits to cultivate in California for a family orchard is something of much value to every owner of a home. The long experience of many of our best orchardists, and the many expensive changes they have been obliged to make to get only the varieties best adapted to our climate, have resulted in much positive knowledge upon the subject that, when properly reduced and arranged, becomes invaluable information to guide the inexperienced and aid each in making suitable selections of fruits for his locality. For the past three years we have given a list each season, obtained by careful and direct inquiry and investigation. Next month we shall present a revised and very complete list, worth to any one who thinks of planting trees for profit or for family use, much more than the subscription price of the Agriculturist. In the meantime such persons as want information upon any particular point upon the subject are invited to send in questions that they may be seasonably answered. The Editor has had much experience in orchard and nursery culture, and feels a deep interest in such matters. The advice we may give will be founded in the experience of several of our best orchardists, and we shall aim to give only what may pass as authority upon the subject.

Sending Plants by Mail.—Plants of almost every kind may safely be sent by mail if properly prepared and packed. The cost of postage is one cent for each ounce weight. An Eastern exchange gives the following advice:

If we were going to send a small package of trees or shrubs by mail, we should first cut off every leaf about half an inch from the bud, and thus prevent all evaporation of the juices of the plant through the leaves. The neglect of this precaution would alone be sufficient cause for failure, as the leaves, if not also enclosed in some kind of damp packing, would soon dry out all the moisture in the roots, tops, and packing material. After removing the leaves, we would next cut off all surplus wood. If the plants were blackberries or raspberries of the present year's growth, they would be worth more with the tops almost wholly removed, than if left on. Then trim off all long, straggling and broken or bruised roots. Next dip the whole plant in a paste made of clay mud just adhesive enough to form a thin coating for the roots, then roll the package of plants well tied together, in a thin covering of damp, not wet, moss from a wet meadow; then roll all in a piece of strong, brown paper previously coated with linseed oil, which would protect the plants from drying out or wetting other matter in contact. Then enclose the whole in a thin piece of stout cotton cloth, which would prevent the paper from tearing. In this way, we should expect hardy plants like raspberries, currants, or little elms, to go safely across the continent.

The Semi-Tropical Fruits that are now being cultivated in California are all proving a success. English walnuts, almonds, olives, oranges, lemons, etc., are growing well in all portions of the State below the snow-belt. There are no fruits that are in better demand or that promise better returns. Every farmer should make up his mind to plant a variety of semi-tropical fruits for home use, if not for profit, this very season.

Entomological.

THE WOOLY APHIS.

IT IS becoming quite too common on the apple trees of this State, and orchardists should be seeking and applying a remedy before it is too late. For the benefit of those who may not have noticed this insect on their trees we will describe its appearance and state in what manner it accomplishes its ravages. The tree effected with the aphis will have on the body and lower limbs, near the main stem, little branches of white, downy-appearing wool or fuz. At a distance these white spots look like bits of eider down stuck about promiscuous on the bark of the tree. Upon closer observation it will be noticed that these bunches of down are mostly to be found covering little warts or knots on the bark. If the tree is badly effected these bunches of down may be seen to the extremes of the limbs, but always on rough places or blotches on the bark and at the points where the new growth joins the growth of the past season. To find the insect, take a little stick and carefully push away the outside down and beneath it you will see a bunch of redish-brown insects of all sizes from that of the point of a pin to a full grown flea—all apparently struggling to get a foothold on or a bite at the bark of the twig or tree. Press the stick upon the bunch and what was before a living mass of insects becomes a putrid mass of redish-brown matter. Brush the bunch away with a feather and a raw sore or wound on the bark will be seen where the downy or wooly bunch had been. Follow the body of the tree down to the ground, and even beneath the surface, and bunches of these insects will be found sucking the sap, or life blood, of the tree at every point.

We have seen strong and vigorous growing apple trees so completely covered with these insects as scarcely to have a spot of natural bark upon them, all being a mass of blotches or warts covered with white down or wool: and we have seen such trees just naturally die from want of blood, or sap, to keep up life and circulation. This insect is to the apple tree what the scale bug is to the orange tree. The only natural enemy to this insect that we have noticed is the common ant; and the wool or down with which it is covered seems to be the only means of protection against the ant's attacks. The wily ant seems loth to attempt an attack through the wooly covering, but cautiously seeks an opening or exposed point, and seizes the aphis in the rear and quickly dispatches him.

THE REMEDY.

These insects may be killed in vast numbers by sweeping the body and limbs of the tree effected with a common broom or cloth swab or mop. But perhaps an easier and better exterminator is to dip the swab into a strong soap suds made of whale oil soap. This is said to kill them while it encourages the healing of the wound they inflict on the tree.

The above, from the *Record-Union*, is good as far as it goes. The wooly aphis is quite as bad upon the roots as upon the upper branches. They like a fine, dry, loamy soil, and apple trees growing in such soil are generally the worst affected. When once this insect gets upon the roots it is almost impossible to get rid of it. The roots get covered with excrescent growth, warty and deformed, from the effects of this sap-sucking insect. Various means have been tried to destroy this pest under ground, but so far as we can learn, with but poor success. Persons buying nursery trees to plant in orchards should be sure that none of the wooly aphis are upon the roots. Several complaints have been made to us by parties who have bought trees affected by this destructive insect.

The Scale Insect.—Within a few years the orchards in many portions of our State have been badly infested by the various scale insects. Every one of our readers who owns fruit trees is interested to learn how to get rid of the pests. They are especially severe upon orange trees. We quote from a letter in the New Orleans *Our Home Journal:*

"There are several varieties of insects that from some cause or other develop on the bark, leaf and fruit of the orange tree. Some of them are almost round, having a scale covering, in shape like that of the back of a turtle, of a dark brown color. Others are of a yellow cast, and shaped like a common wedge, broad across the shoulder as compared to their length, and others still are of a steel gray color and slender in form. This variety of insect is the most dangerous because it is the most destructive enemy the orange tree has. Many years ago it spread all over Florida, doing much damage; it is there yet to some extent. About the breaking out of the war it made its appearance in the groves on the Mississippi river below New Orleans, also in groves above the city, as well as in the groves on the Upper Lafourche and Terrebonne. On the coast below the city the orchards were nearly ruined by the scale insects, before anything could be found to check their growth and spread.

Various remedies were used. The most effective was tobacco juice, obtained from soaking the stems in water, and applying it through small pumps to the limbs of the trees. Most any alkaline solutions applied as before stated are good. A weak solution of soda, potash or ammonia is good as a wash, or a solution of carbolic soap, thrown through a syringe among the branches of the tree. One of the most simple and the most effective remedies that I have ever seen or known used, is the acids formed by the explosion of gunpowder caused to pass through the head of the tree, either from the explosion of the powder from the top of a board held in the hand under the limbs affected by the scale insect, or applied by a common shotgun. The best time to make the application is while the dew is on the limbs and leaves. Let the powder in the gun be pressed by the ramrod, but no wadding should be used. The party with the gun should stand a few feet from the tree. I tried this remedy on several trees badly affected with the scale insect and removed them all in a few weeks, and the trees commenced a new life and recovered entirely.

Let the powder be exploded among the diseased branches—be sure to do it while the dew is on the tree, or after a rain. The water absorbs to a certain extent the gases of the exploded powder and holds them in contact with the insects; either one of the three principal gases formed by the explosion of gunpowder is destructive of animal life. Try this remedy, we feel assured that it will kill the insects on your trees—at the same time give life and vigor to the trees.

Bark Louse on Fruit Trees.—Most of the experiments made for destroying this insect appear to have been rather unsuccessful. At a late meeting of the Pennsylvania Horticultural Society it was a subject of consideration. T. M. Harvey said, however, that he had succeeded by placing pieces of whale-oil soap in the tops of the trees, from which the disolved matter ran over branches and trunk. J. H. Bartram had cleaned the trees by washing with a strong potash solution in winter. Mr. Sproul had put his trees in fine order by placing a bag of the following mixture in the forks of the trees, namely: two pounds copperas, half pound blue vitriol, fourth pound salpetre, four pounds hard soap, four pounds common salt. Others recommended whitewashing, soap and sand applied with a cloth, fish oil, &c.

Financial Economy.

Not Gold, But Men.

BY RALPH WALDO EMERSON.

What builds a Nation's pillars high?
And its foundation strong?
What makes it mighty to defy
The foes that round it throng?

Not gold, but only Men can make
A people great and strong;
Men who for Truth and Honor's sake
Stand fast and suffer long.

Brave men who work while others sleep,
Who dare while others fly;
They build a Nation's pillars deep,
And lift them to the sky.

PRINCIPLES OF A SOUND FINANCIAL POLICY.

The American System.

THE following extract from a leading journal devoted to the people's interests, we regard as sound and worthy of deep consideration:

1. We hold that it is mainly the money laws of a country that determine the relation of men in respect to property. If laws are just, the men who deserve the property will have it; if unjust, the community by degrees becomes divided into lords and vassals.

2. All paper money should be, equally with gold, a legal tender for all men and all purposes alike throughout the country, except where the laws under which the present contract are made require metalic money to be paid. This is to regulate the bases of money.

3. All money should be convertible at the opinion of the holders, for government bonds bearing a rate of interest not exceeding 3.65 per cent. per annum, and the bonds in like manner to be convertible into money at the opinion of the holder. This is to regulate the quantity of money, and the rate of interest upon it and to prevent monopoly.

4. The paper money of this country should be issued by the government and not by corporations, and the manner of issuing should be by the payment of government expenses and obligations, the same way that all greenback money was issued, and not by short and sharp bank loans, nor loans of any kind. This is to dispense with the useless and expensive agency of corporations in the issuing of money, and to secure the permanent use of the money as such for circulation when its used.

This is what we call the American system of finance, because it will supplement our American theory of equal rights, instead of the ordinary European theory of caste in society. It of course meets the opposition of banks, because it will take from them the privilege of

furnishing and drawing interest upon all the circulating medium of the country, and because it will transfer from them to the government depositaries the larger part of the private deposits of the country amounting to some five or ten hundreds of millions of dollars. The system meets the opposition of government bondholders, because it will enable the people to pay off the bonds in gold, and get rid of the burdensome interest. It meets the opposition of money lenders and brokers generally because it will greatly lower the rates of interest, and establish a cash system of business, leaving very little for the brokerage business to subsist upon. And it meets the opposition of gold gamblers because it will take away the premium on gold. It meets the opposition of office-seekers, because they have learned by experience that the successful way to get office is to be in favor with the moneyed interests; and lawyers are not apt to be in love with it because it will generally diminish the business of foreclosures, forced collections and bankruptcies.

But as to all people except the classes above mentioned, this American system will be greatly beneficial for reasons following:

1. It will make the gold money, the silver money, the paper money and the government bonds all of par or equal value.

2. This par value will establish convertibility of the paper money into gold which convertibility will bring all the benefits and avoid all the terrible disasters of forced specie payment. It will avoid all such inflations and contractions as we have been subject to in the last ten years, and give the people a currency adapted at all times to the legitimate demand of industry and business.

3. It will give constant and profitable employment to all laborers, factories and other productive capital and will at once relieve the millions of starving and perishing men, women and children in our large cities.

4. It will greatly increase the aggregate amount of production, increase our home consumption, home trade, home comforts, and increase also our foreign exports.

5. The increase of our exports will give us balances in our trade with foreign nations, which balances are of necessary gold, thus making gold plenty here, and establishing the true gold basis, (instead of the fictitious ones which we will have if driven on to force specie payment), and thus it will be made just as easy for us to pay government bonds or any other obligations, if desired, in gold as in paper money.

6. It is the only way of purifying our corrupt government, because it is the only way to remove the vast corruption found by which the corruption is carried on, or to take away that great susceptibility of corruption that men have in time of monetary stringency and embarrisment.

7. Under the operation of this American system of finance our people East, West, North, and South, becoming prosperous, will follow eagerly the pursuits of industry, and ceasing from the asperities of the past, will grow into attachment for one another and for the government, and the government will wax strong by this attachment.

We do not believe in any such thing as necessary revulsion or panic in monetary affairs, as taught by our finance doctors. These things are all brought on by corrupt legislation in the interest of money and credit dealers. A country without gold or silver, and even poor in other respects, can have good stable currency adequate for domestic use, and such a currency, will stimulate production and thus bring gold. On the cotrary, a country with the wealth of the the Indias, and gold without limit, will have a poor currency and be miserable if its money laws are vicious and partial. We think the doctrine of over production as now applied to our condition, is abhorrent in the extreme.

RADICAL SENTIMENTS UPON THE SUBJECT.

The *Southern Farmer* gives expression to the following facts and ideas:

HOW DEMONETIZING SILVER ROBBED THE PEOPLE.

The bill which passed Congress, abolishing the legal tender of the silver dollar, was concocted by an "English gentleman," assisted by Boutwell, who was then Comptroller of the Curreney, aided by two of their American capitalists, Mr. Hooper, of Massachusetts, who is a capitalist and money lender, and John Sherman, a tool of the money-power in the Senate, literally stole it through Congress. It was never read in the House of Representatives at all, as the constitution requires, and Mr. Hooper, in response to the inquiries of the members, deliberately lied in the debate upon it. Blaine, by one of his most extraordinary rulings, also helped to put it through a House in which the record shows there were only 123 members present. What was the effect of the iniquitous measure? It increased the value of American securities eighteen per cent., and millions of these were held in England. It compelled not only the Government, but all debtors to pay eighteen per cent. additional to the face of their obligations, and made the bondholders and moneylenders richer by eighteen per cent. than they were before. The "English gentleman," who was sent over to help the American Congress legislate was Ernest Sayd, in the pay of one of the heaviest bankers in Europe, and the bill which he frames for our ignorant or corrupt Congress to pass put nine hundred millions of dollars into the pockets of the European and American capitalists whom he represented. By this legislative swindle, gold was first increased in value, and then the pay of all debts, individual as well as governmental, was required to be paid in gold exclusively.

AVARICE IN LEGISLATION.

Let those who favor the ruinous policy of contracting the people's currency to the gold-standard, remember that it means contraction of the value of all property except that of the bondholders; that it stops business and chills every industry, reducing the number of workmen that are employed at the same time that it reduces the wages of those who still find opportunities for work; that it throws millions of men out of work and deprives numberless women and children of food and clothes, and of everything which makes comfortable; that it contracts the products of the farm and freezes in its cold embrace everything it touches, excepting only the business of the bondholders and capitalist. And all for what? only that a few may riot upon the misfortunes of the many, and add to their hoarded treasure while the great mass of the community are bankrupt as the sequence of the wicked laws made to work out the precise results which have allowed their enactment. It is a fearful responsibility which the money-power has assumed, and some may live to rue the day that their avarice got the better of their humanity, and doomed millions of happy workers to suffer in order that the rich might fatten upon the miseries of the poor.

BONDHOLDERS MERCILESS.

The bondholding class are merciless. They first corrupt all our legislation, and make the laws bend and change so as to promote their interests at the expense of every other class in the country. They order the destruction of the people's money in order that theirs may have freer circulation and yield them higher interest and quicker returns. Then they increase the rate of interest lest they lose their hold upon the people. Then they go a step farther, and having got hold of all that circulates as money, they order that by a certain fixed time their debt shall be paid. They control both political parties, and while all the money is locked up in the banks, they demand that the people shall pay them interest upon their bonds, as if it were possible for people to pay money when they have no money with which to do so. Like the Egyptian task-masters, they order the people to pay interest at the very moment when they have deprived them of the only means by which they could obey their order.

GOLD VS. CREDIT.

There is only three billions of gold in the world, on which is built its vast exchanges of property, and probably not more than half of it is in use, the rest being hoarded. Thousands of billions of dollars of property and products are annually bought and sold on bank checks promising to pay gold. Remember gold and bank currency is only four per cent. of the world's money. They are only Saturday night's wages—pin-money—market money. The great transactions of distributing the world's property and commodities are accomplished by 96 per cent. in checks on banks and bankers. These checks are mostly founded on *bank discounts* of individual notes, *promising* to pay gold or based on gold, but really tossed about and balanced at bank counters, without the movement of a single coin! Four per cent. of coin and currency together, to 96 per cent. of checks, based on the banker's promise to pay gold, which could never be redeemed. What a pyramid of inflated credit!—*Ex.*

SON OF THE SOIL.

The cause or causes of hard times I have not now time nor space to detail, but the remedy is short and plain; it is this: Read, inform yourself; there is nothing like it; knowledge is power; it brings money, influence, place, everything; corrects evil, hard times; crushes errors, humbugs, monopolies; reduces taxation, and pays the national debt. Read your agricultural paper, study political economy, know how your government is managed, study finances, religion, commerce, and make yourselves and your sons well-informed reading men and all will be right yet.—*A. B. Marbury, in Rural Sun.*

FRANCE

Has a currency of over $49 per head; the United States has $13 per head. France paid an enormous war debt in a few months: America has her war debt still hanging over her, drawing gold interest. France made her paper money receivable for all dues, the same as coin; this country excepted "duties on imports and interests on the public debt." The paper currency of France always kept even with the coin; the greenback at times was worth but forty cents on a dollar. France has been wise in her financial policy; we have been criminally foolish. France is prosperous and her people happy; our country is prostrated by idleness, want, wretchedness, bankruptcy, general stagnation and all becoming worse every day.

THE LABORER'S PREROGATIVE.

Because a man sells his strength to you for a given time and for a fixed sum, it does not follow that he surrenders to you his manhood for that time or that he places himself upon a lower grade, socially or morally. He does no such thing. "Circumstances over which we have no control," have ard will compel the best of us to place ourselves in positions, erroneously termed menial, in order to obtain a livelihood, but none of us would consent to subject ourselves to insult and abuse because we were unfortunate. No employer has any moral or legal right to abuse his employee, no matter how humble his station in life may be. No employer should be so blind to his interests as to neglect the comfort, convenience and happiness of those whom he employs.—*Son of the Soil.*

THE RELATIVE DIFFERENCE between gold and commodities is constantly widening with growing civilization. Gold accumulates slowly with all man's greediness, while through machinery and invention, commodities are multiplied with inconceivable rapidity. Soon there will not be one gold dollar for every five thousand dollars required to conduct the world's exchanges, and the relative difference will continue still further to increase. One clear reason bankers want a gold basis is so that they can hold the balance of power against the people and extort unjust tribute for negotiating exchanges.

Ethics.

DOTTINGS AND JOTTINGS.

BY ISAAC KINLEY.

Civility pays. If you ask a person a civil question and he has not the decency to give you a civil answer, he will hardly find in you a ready customer, even though he may have the best wares in the market; and you will hardly advise others to him while their wants may be satisfied elsewhere.

You may be above resentment, and only pity the coarseness that insults you. You may excuse in your own mind—palliating the boorishness by reason of the unfortunate organization and training. I grant that charity is an amiable virtue; but with all your philosophy you love not the man who has not treated you decently, and you are not likely to seek a second insult.

If civility pays pecuniarily, it compensates even better morally. For having done well one becomes himself better. Refinement in action refines the actor. Action reacts; and noble deeds, even from selfish motives, stimulate the virtues they are intended only to semble.

Principles underlie all things, and a single one sometimes explains a thousand phenomena. In the pursuit of knowledge, therefore, this is the chief thing to be sought. A principle once thoroughly fixed in the mind enters into the intellectual processes, and is ever ready for the explanation of new facts or the investigation of deeper reasons. The chain of causation has no missing link. Every fact is a consequence of an in-

finity of antecedent causes and a cause of an infinity of consequences yet to come. The universe is law. Themis sits on the throne with Jupiter to counsel and advise, and the Fates are her daughters.

Every one is a builder—man or woman—who increases knowledge or encourages virtue; who makes the world wiser, or better or happier for his having lived in it. Muscle-work and brain-work—the farmer with his plow, the mechanic with his tools, those who do useful work or give to the world useful thoughts; these are the builders. Increased comforts and better and higher civilization are the results of their combined contributions. Reader, be thou a builder!

Find ten men employed and you shall find at least one as capable as the employer of being at the head of affairs. Should the ten combine to do their own work and sell their own wares, dividing equitably the proceeds—this would be co-operation. The increased wealth and consequent comforts would vindicate the system. How long must the children of laborers go hungry to bed in order to teach the simple lessons of mutual help and mutual reliance?

Diffused light is but darkness; but the concentrated rays of even a winter's sun will kindle a flame. Genius itself, scattering its forces on all subjects, becomes wise in none; while even the plodding mediocre, steadily pursuing one subject, becomes a master. A garden well tilled is more beautiful, and profitable, too, then many broad acres producing only brambles and thistles.

Why respect the good more than the bad, the wise more than the foolish, the just more than the unjust, since each is the outgrowth of antecedent conditions? Why value the perfect fruit more than the imperfect, the golden pippen more than the sour crab, the gold more than the dross? Answer these questions and you will have answered those.

Virtue is a quality not to be boasted of, and he who seeks to parade his own excellence is, ten chances to one, only publishing his own vanity. Virtue is a quality existing for its own sake. He who loves virtue loves it for its own sake, and it never comes in his mind to ask the effect it may have in raising or sinking him in the estimation of another.

In finding the value of character, behavior is the chief factor. What one is is measured by what he does. Rogues, it is true, may put on the semblance of respectability, and hypocrites the robes of sanctity; but in spite of this dissembling the inward self will show outward, and the man find his place.

The mind grows through its ideas. Thought is soul food, and greatness comes of enlarged conceptions of truth. As the barren field is profitless, so is the mind which is barren of ideas. The one produces no bread for the world's eating, and the other no thoughts for the world's thinking.

Read the greatest thoughts of the greatest minds, the purest emotions of the best, and they are only your own thoughts put into language, your own emotions given utterance—the granite of your own quarry hewed into symmetry and polished into smoothness.

San Jose Institute, Oct., 1876.

Hygienic.

Light and Air vs. Drugs.

BY DR. R. M. TRALL.

Mrs. Rogers lay in her bed,
Bandaged and blistered from foot to head,
Blistered and bandaged from head to toe,
Mrs Rogers lay very low.
Bottle and saucer, spoon and cup,
On the table stood bravely up;
Physics of high and low degree—
Calomel, catnip, boneset tea;
Everything a body could bear,
Excepting light and water and air.
I opened the blinds; the day was bright,
And God gave Mrs. Rogers some light.
I opened the window; the day was fair,
And God gave Mrs. Rogers some air.
Bottles and blisters, powder and pills,
Catnip, bonset, syrup squills;
Drugs and medicines, high and low,
I threw them as far as I could throw.
"What are you doing?" my patient cried
"Frightening death," I coolly replied.
"You are crazy!" a visitor said;
I flung a bottle at his head.

Deacon Rogers he came to me;
"Wife is a getting her health," said he.
"I really think she will worry through;
She scolds me just as she used to do.
All the people have pooh'ed and slurred,
All the neighbors have had their word:
'Twere better to perish, some of 'em say,
Than to be cured in such an irregular way."
—[Science of Health.

PRACTICAL HEALTH TOPICS—NO. 6.

BY "JEWELL."

DRESS.

PERHAPS in no one way can housekeepers simplify their work more effectively than in the direction of dress. I speak more especially of underwear and working clothes. It is a singular fact in clothing the body but few regard comfort or health as of any importance, unless it be elderly ladies, who, having outlived the warm blood of their youth, see the folly of not dressing warmly; and to be *comfortable* wear a covering of flannel, without, perhaps, in any other way changing their mode of underclothing.

There are three good reasons why a radical change is needed in this direction:

First—The present style is the most unhealthful manner of covering the body imaginable, which I hold to be the most important reason of all others.

Second—It is the most expensive, taking the most material; and

Third—More time is required in the making and putting on than is necessary.

Especially is this true in regard to the dressing of our children. They are simply victims to the fashions of the day, and our daughters are made sickly women for life from the effects of the half clothed condition of their bodies during childhood. Why our little girl should be only half as warmly clothed as her brother, and made to wear tighter clothes and shoes, is an open question. Or why mothers should strive to keep their girls clean—putting on white underclothing and keeping them in the house—while the boys are allowed full freedom, in thick boots, dark, heavy suits, and are expected to get dirty as a natural consequence of boyhood, is one of the problems for the "coming woman" to solve. In dressing for health, we should strive to have the clothing equally distributed over the entire body. If anything the extremities should be the warmest. This may be done effectually by having an entire undersuit of flannel, or cotton flannel, over which but few skirts are needed; and for work, a short dress, not reaching the ankle, with gymnastic pants like the dress, or of red flannel, would, if tried, be found a most convenient and comfortable change from the present long calico dress, which is dragging into everything and never quite clean about the bottom of the skirt.

Those who have adopted this style of dress can vouch for its usefulness and comfort, and it is far less expensive than the old style. As for looks—we are creatures of habit, and have only to get accustomed to anything to like it, especially if it is convenient and everybody wears it. That is perhaps the greatest bugbear in the putting on of anything different from what custom allows. Most women are sensitive and do not like to be odd. But in the country, as a work dress, it would not meet with many critics, and if a whole neighborhood would adopt it there would be but little to contend with in this direction. In the clothing of children this manner of substituting one suit of flannel, reaching to the ankle, (under the stocking,) and to the waist, with dress and full gymnastic pants either like the dress or of red flannel, would do away with more than half of the present sewing and washing of the family, where there are many children, thus giving the weary mother rest and time for reading, or many pleasures she is now deprived of. The new styles of underclothing, the patterns of which are advertised in the Agriculturist, will prove a blessing to every one who will adopt them. Make the undergarments of warm material, especially for the children.

Remedy for Insomnia. — If much pressed with work, and feeling an inability to sleep, eat two or three small onions, the effect of which is magical in producing the desired repose. Such a remedy has a great advantage over the stupefying drugs commonly resorted to for this purpose, and is ever preferable to the *liquor opii sedat* and chlorodine of medical practice.

How to Deal With Little Accidents. In every home, says the Prairie Farmer, there ought to be a place known to all the members of the household, but out of reach of the children, set apart for things which are likely to be wanted in case of accident. These should include a good pair of scissors, three or four large needles, ready threaded, some broad tape, a little lint, a roll of old linen, flannel and calico, part of each should be torn into strips, some sticking plaster, gold-beater's skin; turpentine, lunar caustic (nitrate of silver), tincture of arnica and tincture of calendula. The possession of these articles will enable any one who can act with self possession and nerve to deal promptly and wisely with most of the everyday accidents to which flesh is liable. These are included in the following list.

CUTS.

Cuts require to be treated suitably according to their position and character. A cut finger is best tied up in a rag with the blood; for blood is very healing. If a cut has any foreign substance such as glass, gravel, or dirt in it this should be removed by being bathed in lukewarm water before the rag is put on. If a cut is severe the blood should be examined. If it is dark, and oozes slowly from the wound, it comes from a vein, and is not serious; if it is a bright scarlet, and spurts out of the cut like water from a fountain, it comes from an artery, and a doctor ought at once be sent for. Until medical aid can be procurred the wound should be tightly bound, and the artery should be tightly pressed above the wound and nearer the heart. If the skin gaps from the cut, the edges should be at once brought to their proper position with calendula plaster. If in a little time it begins to throb, the plaster should be removed, and a rag moistened with calenulated water applied; is useful for wounds where the flesh is deeply cut or torn. If a little lint is soaked in it and put upon the wound, it will in nine cases out of ten prove most beneficial. It is made by mixing thirty drops of the pure tincture of calendula, which may be bought of any chemist, with a half tumblerful of water. A cut on the head requires great care. The hair should be cut all around the place, and lint be dropped in calendulated water and laid upon it. As long as the first dressing of the cut remains firm and gives no pain, it need not be touhced.

STINGS FROM INSECTS.

After being stung by a wasp or a bee, the first thing to be done is to remove the sting. This may be done with a pair of small tweezers, or the sides of the wound be pressed with a small key, and so it may be squeezed out. Then apply to it immediately spirits of champhor, sal volatile, or turpentine, or failing these, rub it with a little common salt, or a little moist tobacco or snuff. If a wasp or a bee stings the throat, a little turpentine should immediately be swallowed. If the place swells very much, and looks inflamed, it should be bathed with arnica, or have a hot white-bread poultice laid upon it. The arnica may be made by mixing twenty drops of the pure tincture with half a tumblerful of water.

The Grape Cure.—The London Garden speaks of the Grape Cure as follows: "There are on the Continent numerous establishments devoted to the application of this remedy two in France, three or more in Switzerland, and many in Germany, Australia and Hungary. The cure is very simple. It consists in eating an immense quantity of grapes. The patient takes but little ordinary food, and is required to eat three or four pounds of the fruit a day at first, the quantity gradually increased at night, ten or even twelve pounds of grapes. This is, if possible, to be eaten in the open air; in the vineyard whence the supply is derived—an arrangement which, no doubt, greatly conduces to the efficiency of the cure." The cure is very simple, certainly, and, we should judge, very captivating; it is not remarkable, therefore, that it should be very popular.

Remedy For Dyspepsia.—A writer in the Medical Journal, discoursing on dyspepsia says:—We have seen dyspeptics who suffered untold torments with almost every kind of food. Bread became a burning acid. Meat and milk were solid and liquid fires. We have seen these same sufferers trying to avoid food and drink, and even going to the enema spring for sustenance. And we have seen the torments pass away and their hunger relieved by living upon the whits of eggs, which have been boiled in bubbling water for thirty minutes. At the end of a week, we have given the half yolk of the egg with the white, and upon this diet alone, without fluid of any kind, we have seen them begin to gain flesh and strength, and refreshing sleep. After weeks of this treatment they have been able, with care, to begin upon other food; and all this the writer adds without taking medicine. He says that hard boiled eggs are not half so bad as half boiled ones, and ten times as easy to digest as raw eggs, even in egg-nog.

Apiary.

Honey Plants of Southern California.

J. W. SALLEE writes to the Anaheim *Gazette* the following on honey plants: You see here in this little valley a variety of shrubs or weed which we call "wild alfalfa." It is very full of bloom, a small yellow flower, and produces a great deal of the nicest honey. And this rough greasewood brush—see what a pretty blossom it has! Bees don't work much on this and these other large flowers you see, the cells being too deep. But this shrub, with a branch of flowers on the end of the twig, of various colors, we call wild buckwheat; it produces a great deal of nice honey.

You see over this mesa a large field of white sage, just coming into bloom. This is our brag honey plant. It will remain in bloom for about seven or eight weeks. All that white bloom you see on the sides of the hills is black sage-bloom. It has been out about four weeks and will remain in bloom two or three weeks longer, and makes a quality of honey nearly as nice as the white sage. But at present the bees prefer the wild alfalfa.

You see all over the hills, and especially in these small valleys, those clumps of bushes. That is the sumac and will bloom in July, continuing for six or eight weeks. It secretes a large amount of honey, but of a red color. Bees gather honey probably more rapidly from that than any other flower. Now take a general view of the hills and valleys; you see, probably, more flowers than you ever beheld before at one view. If there were 100 hives of bees on every square mile of land, I scarcely belive all the honey secreted by these flowers would be gathered. And to think of it all going to waste, just for the want of gathering! It is enough to make a man grow eloquent to stand here on top of this hilt and look at this beautiful mountain scenery—the healthiest on earth—all covered with beautiful flowers, stored with the delicious nectar, and to think that it all, or nearly all, goes to waste for the want of gathering, without any one save a few isolated bee men, to enjoy and appreciate it! Why, sirs, we have the prettiest part of the country. You cannot turn your eyes in any direction but you behold a different scenery—not that monotonous extension of level land of the valleys, but here a beautiful rolling hill, all covered with green grass; there, a rough mountain side, overgrown by rough mountain brush; yonder, a precipitous rough cliff of projecting rocks, each hill alternating with a lovely little valley, with its clear stream of running water. Now, this mountain country is good for nothing much but bee raising. It is true, much of the land could be put to fruit and do as well as the valley land, probably better; but, there should be a bee man on every thousand acres at least, with bees enough to gather thousands of tons of honey now going to waste. Many say, "Is the bee business going to be run into the ground?" I answer, "No!" The honey producing district of California is only a narrow strip on the west side of the mountains of Southern California, extending from Santa Barbara to the State line south. And compared with this State alone it is a very small portion, while compared with the whole United States it is but a drop in the bucket.

Managing Bees.—At the late meeting of the Northwestern Bee-Keepers' Association, the following answers were given by three practical bee-keepers to the questions placed in the question drawer during the meeting:

1. What is the best method of controlling the swarming fever? The free use of the extractor, or by making an artificial colony.

2. Is it an injury to bees to have more forage in the spring than they need for brood rearing? Yes.

3. Is it necessary to give bees light when is wintered in the cellar or house? No.

4. Should bees have ventilation in wintering; if so, how much? Yes, not as much as is generally given.

5. Side or top boxing, which is preferable? Two of the committee were in favor of top boxes, one in favor of both.

6. Which is the better method of swarming, natural or artificial, where box honey is the object, and you wish to double your stocks? Two of the committee prefer natural swarming; one prefers artificial.

7. Which is advisable to produce, box or extracted honey, when you have a ready market for either? Both.

8. Why do bees seal up cracks and openings in the hive? To retain the animal heat.

9. Should an excess of honey be removed from the hive in the fall or in the spring? In the fall.

10. How far apart should apiaries be located? From four to seven miles, depending upon the size of the apiary.

11. Is it important with the Italian bees that the guide combs in the surplus boxes extend from bottom to top of honey boxes? The more comb the better.

12. Why do bees leave their hive about the 1st of May? Discouragement from confinement, mouldy combs, or small cluster of bees.

13. What is the best method of preventing after-swarms? Introduce a young, fertile queen.

14. How should a queenless stock be managed, when the keeper has no queen in the spring? Unite with another stock having a queen,

15. What should be done when in the case of an after-swarm whose queen had been destroyed, and which had been returned to the parent stock, but which persisted in coming out day after day? Destroy queens until all save one is gone.

16. Upon what condition does success in wintering depend? Good stocks in the fall; proper temperature and ventilation; perfect quiet.

17. Is there any sure cure for foul brood save the destruction of bees and comb? Yes, by preventing the brood rearing, by the free use of the extractor, and by smoking the comb with brimstone.

Relative Contents of Different Sized Honey Boxes.—After weighing a great many boxes of different sizes, and figuring it all out, I have found, as a rule, that a box when filled with newly made comb, and the honey well sealed over, will contain three pounds of honey to every one hundred cubic inches of space contained in the box. Thus a box ten inches long, six inches wide, five inches deep, inside measure, will contain three hundred cubic inches of space, and will consequently hold nine pounds, when filled as above stated. This rule holds good with any size of a box, from about twelve pounds down to five pounds. Boxes of the capacity of fifteen to twenty pounds usually contain a trifle in excess of the above estimate, while those of twenty-five pounds capacity, frequently contain two or three pounds in excess.—*Ex.*

California Honey.—We received a call from Mr. Chas. J. Fox, of San Diego, California, who visits Chicago on business for the San Diego Bee-Keepers' Association. The honey interest in San Diego county is a large and rapidly growing one; the estimated crop this year being 500,000 pounds of comb, and about an equal amount of extracted and strained honey. Mr. Fox has samples of both, which we consider very fine. The Association, which was incorporated about three months ago under the laws of California, is a co-operative one, in the interest of the producers. They propose to repack and grade all the honey shipped, affixing certificates of quality to each case, in the same manner as Government revenue stamps. They have a store-house in San Diego where this is done under personal supervision of the officers of the Association. Arrangements have been made for careful handling on steamers and cars, and for through shipment from San Diego to Chicago or other Eastern cities, in carloads, where the honey will be placed in the hands of commission merchants and agents for sale; the object being to sell direct from producer to consumer. The officers of the Association intend to establish a national reputation for San Diego honey, which they believe excels in color, body and flavor any other in the world. There is a very large area of honey-producing territory in Southern California, embracing Santa Barbara, Los Angeles and San Diego counties, and as it can be produced there for less than the materials for making artificial honey can be bought for, the public may be sure that any honey shipped from that region is perfectly pure, and the San Diego Bee-Keepers' Association propose to guarantee all extracted or comb honey shipped by them. Mr. Fox intends to canvass our market and go to other Eastern cities for the same purpose. Such societies as he represents are of great benefit both to producers and consumers, and we heartily wish them success.—*American Bee Journal for October.*

Mr. Harbison has attended the Centennial with a very handsome case of honey. The case alone cost $250. He has 3,000 stands of bees, and they annually produce about one hundred tons of honey.

Fifty Tons (100,000 Lbs.) of Honey.—H. K. & F. B. Thurber & Co., of this city have received the above enormous consignment of honey from one association of California bee-keepers. Verily California does "beat the world" for honey.—*Bee-Keepers' Magazine for October.*

Tree-Planting.—A correspondent in Livingston, Illinois, reports that the planting of trees in groves and shelter-belts, and for ornimental purposes, has become very general in that country. Ten years ago 95 per cent. of the acrea of the county was treeless; but now a farm without a grove is an exception to the general rule. Black-walnut has the pteference for profit and ease of cultivation; but elm, soft maple willow, cotton-wood, European larch ash and common white evergree are popular for ornamental purposes, and occasionally are planted in groves and shelter-belts.—*Agricultural Report for September.*

The Horse.

How Horses are Driven.

BY J. A. C.

To begin, there's your boy, anywhere along from ten years upward, that believes in "making a horse go." Send him on foot and he is in no hurry, but give him a horse and he must leave the road behind him as fast as possible. The whip, if ever applied to himself, he thinks something terrible; but he never thinks the horse has feelings. It is so easy to use the lash that he does not consider the pain it inflicts. A little judicious admonition on the part of parents or others might make many a dumb animal's journey through the world less unpleasant.

Then there's the young man that will needlessly put a severe bit in a docile horse's mouth that he may suddenly check him in his speed *a la* Spanish vaquero. Many Spanish horsemen are exceedingly indifferent to the feelings of the animal they use, and many thoughtless young men will imitate them with as much zest as will children a clown after a circus. The horse is one of the noblest animals, and he will reciprocate kind treatment, coming to have great confidence even in danger when he hears his master's voice. In most cases a bad horse has at some time had a bad master, or has one now.

It is always well to have a whip when a horse is driven, not that he may be whipped, but because he can be better controlled with it when it is necessary. The habit which many have of urging a horse by jerking the bits against his gums is not good. The gums are sensitive, and the pain inflicted by a hard jerk is needless. Every day I see horses pass that are driven by severe jerks on the bits, causing the horse to thrust his nose forward in a very ill position. If a man has any pride about the appearance of the horse he drives he certainly cannot drive by jerks on the horse's gums. I have never seen a trained coachman jerking the mouths of horses, nor do I remember ever to have seen a fine span of horses setting their noses away ahead of them to lessen the force of a jerk from the bits. The owners of such teams are too considerate of the appearance of their horses, and have too much pride in them to see them in so ungainly a position. The moderate tightening of the reins as an intimation of better time may be allowable, but it should not degenerate into a jerk.

Some check their horses by the check-rein till the animal's head is lifted away out of its natural position into an exceedingly uncomfortable one. At this moment one such is passing me with head drawn up as if it was about to crow, but crowing is for the most part a prerogative of roosters.

A little consideration would save a deal of unnecessary suffering and pain; and who really wishes, when he reflects about it, to diminish the happiness of a single being?

There is a grove of over 20,000 ash and maple trees growing near Los Angeles for carriage and manufacturing timber. The trees are said to be in a very thrifty condition.

A Trick of the Trade.

There is not found one gold dollar in all the world for every thousand dollars of bank promises to pay the demand for real gold.

The Dairy.

When the Cows Come Home.

When klingle, klingle, klingle,
Way down the dusky dingle,
The cows are coming home;
How sweet and clear, and faint and low,
The airy tinklings come and go,
Like chimings from the far-off tower,
Or patterings of an April shower
That makes the daisies grow;
Ko-ling, ko-lang, kolingkelingle,
Way down the dark'ning dingle,
The cows come slowly home;
(And old-time friends, and twilight plays,
And starry nights and sunny days,
Come trooping up the misty ways,
When the cows come home.)

With jingle, jangle, jingle,
Soft tones that sweetly mingle,
The cows are coming home;
Malvine and Pearl and Floramel,
DeKamp, Red Rose and Gretchen Schell,
Queen Bess and Sylph and Spangled Sue,
Across the fields I hear her "loo.oo"
And clang her silver bell;
Go-ling, go-lang, golingledingle,
With faint, far sounds that mingle,
The cows come slowly home;
(And mother songs of long gone years,
And baby joys and childish fears,
And youthful hopes and youthful tears,
When the cows come home.)

With ringle, rangle, ringle,
With twos and threes and single,
The cows are coming home;
Through violet air we see the town,
And the Sunset sun is slipping down,
And the maple in the hazel glade
Throws down the path a longer shade,
And the hills are growing brown,
To-ring, to-rang, toringleringle,
By threes and fours and single,
The cows come slowly home;
(The same sweet sound of wordless psalm,
The same sweet June-day rest and calm,
The same sweet smell of buds and balm,
When the cows come home.)

With tinkle, tankle, tinkle,
Through fern and periwinkle,
The cows are coming home:
A-loitering in the checkered stream,
Where the sun-rays gleam and beam,
Clarine, Peachbloom and Phebe Phillis,
Stand knee-deep in the creamy lilies,
In a dreamy dream;
To-link, to-lank, tolinkletinkle,
O'er banks with buttercups a-twinkle,
The cows come slowly home;
(And up through memory's deep ravine
Come the brooks old song and its old-time sheen,
And the crescent of the Silver Queen,
When the cows come home.)

With klingle, klangle, klingle,
With loo-oo and moo-oo and jingle,
The cows are coming home;
And over them on Merrill Hill,
Hear the plaintive cry of the whip-poor-will,
And the dewdrops lie on the tangled vines,
And over the poplars Venus shines,
And over the silent mill;
Ko-ling, Ko-lang, kolingtelingle,
With wag a lang and jingle,
The cows come slowly home;
(Let down the bars; let in the train
Of long-sung songs, and joy and pain,
For dear old times come back again
When the cows come home.)

FOR MILK OR FOR BEEF.

FARMYEN, as well as the common farmer and stock breeder, are interested in the question of breeding "for milk or for beef." Is not the true solution in breeding for *both* milk and beef? The best beef cattle in the world, the short-horns, were derived from a stock noted for dairy cattle. There is yet a class of short-horns that seem not to have lost their excellence as milkers by being improved for beef cattle. It is certainly possible to combine the excellencies of both dairy and beef stock in one; and the nearer the farmer and dairyman comes to doing this, the better. A cow that will produce fine calves, the males of which can be soon grown into fine beef stock, that will readily take on growth and fat, is certainly worth more than a cow fit for nothing but milk. After a cow has become too old for profitable milking, if she can be fattened for beef, and will sell at a high price, it is surely a great advantage. Her heifer calves, fit at once for beef and for milk stock, are more valuable than scrubby looking stock of any breed. The small Jersey's are valuable for hilly farms, where heavy stock cannot run with comfort and safety, also for family use in towns and cities; but on rich valley lands, good short-horn milkers are certainly the best. The same nutrition that produces meat and fat, will produce milk. The beef-making short-horn, while in dairy use, will expend in milk and butter producing, what, if not giving milk, would go to beef producing. In other words, while in use as a dairy cow the strongly organized and capacious power of building up, will be devoted to the elaboration of milk. When she is dry the same force will work to lay on flesh.

We are sure that our dairymen will find it to their interest to cultivate the beef qualities as well as the udder. Either quality *may* be done separately, but it is not inconsistent to combine both the milk and beef producing qualities in one, and thus produce the "coming cow."

Managing Cows In Holland.

From a condensed report of Dr. Starring, in the *London Field*, on the Daily Husbandry in Holland, we make the following extract:

In the dairying districts—mostly exposed tracts of land without a tree—the usual plan of protecting them against the cold and wet is to fasten round their bodies a thick tow cloth, and occasionally a rough shedding is erected to serve them as a shelter. On their return to the stables they are attached by the neck to two stout posts, having movable rings that slide up and down as the animal changes its position. The usual arrangement is for the cows to stand face to face in two rows. Between the latter runs a feeding passage, and behind the cattle there is a channel and plenty of room to remove the droppings. From time to time pea, rye, barley, and oat straw are substituted for a change, and either rape or linseed cake—about a cake a head—is dissolved in the water they drink. Some farmers, however, prefer to give the cake in its dry form, thinking it goes further in that way and is more wholesome. Turnips are not much grown or used as cattle food in the dairying districts; they are occasionally given, however, as a supplementary article of diet, also beets, carrots, white and red clover and spurry; and in the vicinity of towns the refuse of breweries and distilleries is a common feeding material.

The calves are never allowed to suck, and receive for the first four weeks pure milk, after that sour milk, and buttermilk, or whey according to circumstances. At the end of four months the same nourishment is given them as to the full grown cattle; but they often get sour milk, etc., besides. In those localities, such as the neighborhood of Nykerk and Nymegen, in Gueldenland and Veghel, and Breda, in North Brabant, where the fattening of calves is largely and successfully carried on, the usual plan is to put them directly after birth into small pens or boxes, which are just large enough for them to stand up and lie down in and are kept dark. The calves get twice a day as much fresh drawn milk as they will consume, and for the first week each animal is fed exclusively on its own mother's milk. Such importance do some farmers attach to the calves consuming nothing but milk, that they muzzle the creature in order that they may not chew and swallow any of the litter. A calf fattened in the above way will weigh in ten to twelve weeks, fat and lean together, 150 to 200 pounds.

Rearing Stock to Make Good Milkers.

The best method of growing stock to make them most profitable for the dairy has recently been discussed at some length by Mr. A. L. Fish, of Herkimer, in the Utica *Herald*. The pominent idea advanced by Mr. Fish is that in in order to rear cows for "fluent milkers," they should have *succident food* from their birth till brought into milk, which, he says, is usually at two years of age, if the animal is well raised. He argues that the food of a calf, when a change is made from milk, should be cooked and fed warm, or near the temperature of blood heat, because it facilitates a more perfect digestion, for which the distributing functions are in waiting. This position, he says, is fully demonstrated by the fact that in the change from milk to grosser food the young animal shows less thrift, proportionate to increased functional labor required to fit the food for assimilation. The calf adds more weight in growth from a given amount of food it takes during the first week than ever after. The extraordinary size that a calf will attain at eight months old, having been supplied with all the new milk it would take, three times a day, compared with a calf otherwise equal, except that its food is unprepared for ready assimilation, shows it expedient to prepare the food as near as possible for ready distribution in the system, especially for forced growth and for milch cows.

A skillful breeder, he argues, must understand adapting the various kinds of food to develop essential points and fix them by habit in the constitution. The functional relations in the animal organism are based upon the principle of demand and supply. Hence the early exercise of the faculties most essential for practical use.

He would have the animal reared on food that is calculated to stimulate a milky habit, and he would have the animal "come in milk" at an early age, thus educating her from birth for the special purpose of the dairy. Mr. Fish, we understand, has been quite successful in rearing "deep milkers," and his views may be suggestive to those who are growing stock for the dairy.

California Raisins.

The production of raisins in California is rapidly assuming the proportions of an important industry. The grape crop now maturing is probably the largest that the State ever produced, and with an overstocked market, both for table and wine, more than usual attention is being directed to the manufacturer of raisins. It is generally conceded that the growing of grapes in this State at one and one-half cents per pound is a profitable business, and the most experienced producers have demonstrated that this rate can be realized from the crop if it be turned to raisins. Three pounds of muscat grapes will make one of raisins, while the cost of cutting and boxing is estimated at one and one-half cents per pound and if one cent be allowed for freight to San Francisco and commission for selling, we have seven cents per pound as the total cost of production. No good California raisins have yet been sold as low as this, but it is deemed best to keep the estimate on the safe side. At seven cents per pound the California fruit can successfully compete with the imported, and a large business can be done with the Eastern States. The annual requirements of this market are estimated at from 18,000 to 20,000 boxes, the quantity varying somewhat with the price. Last season the receipts of California raisins at this port aggregated 18,000 twenty-pound boxes, and the production of the State reached at least 20,000 boxes. Of this quantity about 6,000 boxes were shipped to New York, St. Louis and Chicago. The best authorities estimate the production this year at 60,000 boxes, consequently a market for about 40,000 boxes will have to be sought for in the Eastern States. If the quality of the new crop comes up to that of the best produced last year, not the least difficulty is anticipated in placing the surplus, though it were ten times greater. The possible proportions that this trade may attain are shown by the imports of foreign raisins into this country, which for several years have ranged from 1,000,000 to 1,300,000 packages, valued at $1,500,000 to $2,500,000, at New York alone.

Here, then, would appear to be one branch of the fruit business open to our farmers, that has not been overdone, and is not likely to be for years to come. The curing of raisins, unlike wine-making, requires no costly appliances. A piece of ground with a smooth surface sloping to the south and provided with movable covering to keep off dews and showers, is all that is required. Indeed, some of the finest raisins brought to this market have been cured upon the ground between the rows of vines upon which the grapes were grown. It is a well-settled fact among the most experienced producers in the State, that however superior machine-dried raisins of other varieties may be, the best raisins are cured by sunshine.—*S. F. Call, Sept. 27th.*

Value of Farm Animals.—According to the Department of Agriculture, the value of farm animals in January, 1876, were as follows: Horses, $632,446,985; mules, $106,565,114; milch cows, $320,366,728; oxen and other cattle, $319,623,509; sheep, $63,666,318; swine, $175,070,484. Grand average as follows: Horses, $64.96; mules, $75.33; milch cows, $28.89; other cattle, $19.04; sheep, $2.60; swine, $6.80. The average value of horses was greater in New Jersey, $110.84; least in Texas, $33.17. Of mules, greatest in New Jersey, $128.32, and least in Oregon, $45.68. Cows, greatest in Massachusetts, $48.33, and least in Florida, $14.62; other cattle greatest in Rhode Island, $49.62, and least in Florida, $8.14. Sheep, greatest in New Jersey, $5.01, and least in North Carolina, $1.58. Swine, greatest in Massachusetts, $18.03, and least in Florida, $2.26.

Flax growing has within the last half a dozen years become quite an important crop in several of our coast counties. The San Francisco Oil Factory has mostly contracted for the crop each year in advance at fair paying prices. We hear some complaint this season from farmers that this establishment is bearing down upon the flaxseed producers so as to discourage them from further cultivation of flax. The farmers look upon the Oil Manufactory as a growing monopoly, and want other market opportunities, new oil mills, or must go at something more remunerative.

The Grain Grower.

Corn Song.

BY J. G. WHITTIER.

Heap high the farmer's winters board;
Heap high the golden corn:
No richer gift has Autumn poured
From out her lavish horn.

Let other lands, exulting, glean
The apple from the pine;
The orange from its glossy green,
The cluster from the vine.

We better love the hardy gift
Our rugged vales bestow,
To cheer us when the storm shall drift
Our harvest fields with snow.

And now with autumn's moonlit eyes,
Its harvest time is come.
We pluck away its frosty leaves,
And bear its treasures home.

But let the good old corn adorn
The halls our fathers trod;
Still let us for this golden corn
Send up our thanks to God.

CRACKED WHEAT AND SMUT.

BY D. A. L.

THE origin of smut in wheat is from cracked grains which have vitality enough to germinate and grow, but not enough to mature the grain.

WHEAT THRESHED ON THE GROUND

By the tramping of horses, and sown without the application of any preparation to it, does not produce smut. Wheat that falls to the ground in the field and makes a volunteer crop does not produce smut. Such wheat, like any other, may blast: that is, for the want of a perfect fructification, a black substance is found in the place of the grain, which blows away before harvest, but the real smut remains in its "sack" till after threshing. Probably the cause of blasting is high winds during the time the growing grain is in blossom.

PREVENTING SMUT.

Since the use of threshing machines became general, every wheat raiser uses quicklime or bluestone, (*sulphate of copper.*) These corrosive substances penetrate the grain where the skin is broken, and destroy the vitality of the fungus germ, and thus prevent smut.

WRONG PRACTICE.

I have known farmers to sprinkle wheat with a solution of sulphate of copper, and immediately apply lime. This method will not prevent smut, because the sulphuric acid unites with the lime immediately, forming sulphate of lime, (plaster of Paris,) leaving the copper in a metalic state, and the last chemical arrangement renders the whole inert.

LIME MAY BE USED

In the manner following: Pour the wheat in a trough, sprinkle and stir till well wet, add lime and stir well. If properly done the lime adheres to the grain like plastering. Lime applied in this way not only prevents smut, but also stimulates the young plants. The dust from lime in sowing is very offensive to the eyes, nose and mouth, for which reason most farmers use

BLUESTONE,

My method of using which is as follows: Dissolve 3 pounds of bluestone in a wooden bucket, using hot water; put 50 to 60 gallons of water in a trough and pour in the solution. Take sacks of wheat and divide them into other sacks to make them convenient to handle. Immerse them in the trough for three or four minutes, then lift them on a platform where they will drain into the trough. Add bluestone and water from time to time so as to use 4 to six pounds of bluestone for each ton of wheat.

THE CRACKING OF WHEAT

By threshing machines can and should be avoided. If the cylinder and concave teeth are adjusted so as to pass at a proper distance, and the grate bars made smooth and free from sharp angles, and the speed kept down so that the grain is not hurled as shot from a gun against the grate bars, the grain would come out in perfect condition for seed. Unfortunately, steam supplies the power, and job work the temptation to make one-twelfth of the crop unfit for that purpose.

Stockton, September 26, 1876.

RICE LOWLAND AND UPLAND.—Louisiana is rapidly outstripping all the other rice growing States in the quantity of production of this cereal. It is thought her crop this year will be over 200,000 barrels, or nearly fifty millions of pounds.

Rice was cultivated along the Mississippi immediately after the French settled at New Orleans. It is said that the first rice raising in America was accidentally procured. A brig from Madagascar on her way to England found her way into Charleston in 1695, and the captain gave a bag of paddy rice to Landgeave Smith, who distributed it, and as it flourished so well, it soon became the prime crop of Charleston and Savannah. We do not think that the French obtained their rice from that source, as their rice was always inferior to the Charleston and Savannah rice, and it is only now that we are getting rid of the evil effects of inferior seed, and of couse a worse quality of rice than our neighbors raise. But it is being done, and the quality of Louisaiana rice is raising the grade every year, and with the vast increase of quantity and improvement in quality, the Louisiana rice will soon command the rice trade of the world.

Flooded or Lowland rice is the kind most rapidly cultivated, and is adapted to the lowlands which can be flooded. The great fields lie along the Mississippi and Latourche, but there are others in the interior where streams may be dammed and turned into lowlands when needed.

The mode of culture in this kind of rice is simple but thorough. The fields are laid off in small slices, which vary greatly in size. There are one or two main canals leading the water as it overflows from the stream to the field; from these smaller canals and ditches conduct the water as wanted into each section. Every patch or small field is laid off to itself with its own ditches and levees around it, and a flood gate at the main ditch to let on the water, and another at the lowest point to take it off. The ground is usually broken well as early in the spring as possible; the rice is then sowed so that it is not likely to be affected by frost; some drill, which is better. The water is let on after planting and allowed to remain until the seeds are well sprouted. It is then drawn off and the rice allowed to strengthen a little, when the water is again turned on and allowed to remain several weeks. Some again draw off the water to clear the field of weeds; others do not, and pull up the weeds, wading in the water to do so. At all events the water is turned on some weeks in advance of the heading, and is always to remain until it is drawn off for the last time to let the grain harden and ripen, when it is cut with the sickle, and not as it might be with the California header.

When cut it is tied in bundles like wheat and shocked in the field until hauled away to be stacked or thrashed.

The whole operation is a simple one, and one hand may cultivate thirty acres.

The yield is about an average of 1200 pounds of threashed rice to the acre.

The *Upland* or *Moundain Rice* is of a hardier kind, and not quite so long in the grain nor as white as the lowland rice. It may be raised wherever cotton will grow, and it is more productive than the watered rice, often gives 1800 pounds of clean rice to the acre. It may be planted from the 1st of April to the 1st of June in this State, and the ground should be as low and moist as can be had to be susceptible of cultivation. It is usually planted in drills, or better in hills. If in drills the rows should be about three feet apart; if in hills the rows should be three feet one way and about fifteen inches the other, so as to admit cultivation both ways.

Thus prepared, the unhulled or paddy rice should be planted at the rate of a peck to the acre, rarely more, as with a good stand it stools more than any other plant. Planted in hills, about four or five seeds in a hill is enough.

It should be worked vigorosly with plow and hoe so as to be kept clean, until it shades the ground, when it will do to lay by. Some three plowings and scrapings will answer. Thus cultivated, it yields enormously in good ground anywhere in the uplands, and will make from fifty to one hundred bushels of rough rice to the acre, in addition to the straw, which, if properly saved, all stock animals eat with avidity.

The rough rice may be thrashed in a wheat thrasher, or even on the bare floor with a flail very fast.

The cultivation of upland rice should be extended.—[*New Orleans Our Home Journal.*

Correspondence.

LETTER FROM SANTA CRUZ.

SANTA CRUZ, Oct. 1, 1876.

ED. CALIFORNIA AGRICULTURIST: It is often a subject of remark that this beautiful little city does not receive more notice in your columns. Is it owing entirely to the remissness of your old correspondent from this place; It is but natural that those making their homes here, should feel interested in having outsiders know the advantage of a residence in Santa Cruz, and hoping others may follow my example and give you occasional notes from their own stand points, I beg your acceptance of a few lines.

This centennial year has been an eventful one for Santa Cruz. The long talked of

NARROW GAUGE RAIL ROAD

Between here and Pajaro has been completed and was opened to the public early in the season, our first class private boarding houses have had to more than double their capacity, by the building of an elegant addition which however proves inadequate for the accomodation of numerous guests who were compelled to seek shelter among private families in the neighborhood, taking their meals in the spacious dining room of the establishment.

SURF BATHING AND PICNICS

Has been the order of the day and the town has been lively with teams and horseback riders, as well as with pedestrians in fashionable attire.

A complete description of the beach during bathing time appeared some time ago in the Sunday Chronicle, and when you consider that for upwards of five months the same scenes have occurred each day with scarcely any intermission, it is not to be wondered at that old residents become accustomed to it and find less novelty and enjoyment there than the new comers.

New houses are springing up and improvements in the way of widening streets and planking sidewalks are in contemplation. The narrow guage road between here and Felton, also completed this year, is in successful operation. The company have built a fine wharf at the beach for shipping the lumber brought from the Redwoods

BY FLUME AND RAIL,

And other improvements are in progress. The work of tunneling under the upper plaza is soon to be accomplished, which will enable the company to send trains by steam close to the water's edge, instead of going through the town with horses as they now are obliged to. In order to accomplish this work as speedily as possible the enterprising superintendents employ three gangs of men who each works eight horse shifts night and day. How the prayers of the devout must ascend to the Throne of Grace from the Church above, for the brethren in the tunnel below, (no Chinamen being employed.) This is

THE TRUE SEASON FOR CAMPING,

As game is plenty and the law no longer prohibits the taking of it. Several parties have already gone, but mostly unattended by the gentler sex, who are often timid in the use of fire-arms. These *stag* parties are by far the most successful and bring in more game, while the ladies prefer cooking it by their own firesides rather than over the camp fire. Though the season is far advanced the daily train comes well patronized, and the company congratulate themselves upon the fact that this peice of road has yielded as large a revenue as any other in the state. Families are coming in to

MAKE HOMES AMONG US

Attracted by the railroad communication as well by the educational facilities, which have also received a fresh impetus in the form of a new school house costing some $20,000. An excellent corps of teachers are employed, who gives general satisfaction. It is one of the necessities of the age to give our youth school education, but mothers who have children growing up more interested in play than study or work, would like to see added opportunities for diverting their attention toward useful employments so that upon leaving school a desire for industry would lead them to obtain situation for becoming self supporting. Your paper continues to be a

GENERAL FAVORITE

Here, and I hear the ladies wondering why the Editor does not always affix the prices to the illustration of articles in the way of plant stands, aquariums and the like which are to be obtained in your city. Also wishing you could advertise prices of frames for chromos, of which every family usually has more than they feel able to frame at prices asked. I find a marked difference in the San Francisco prices of such things and those we are here expected to give, and presume they are less with you.

Hoping you may live to see the day when the CAL. AGRICULTURIST will have become a household necessity, everywhere, alike for the rich and the poor, I close. HELENA.

It is the conscious want of merit that causes one to depreciate the merit of another. Unable or unwilling himself to go up, he would drag all others down.

Porcine.

Hogs And Alfalfa Hay.

JUDGE DIXON, of the Buena Vista Ranch, on the occasion of a recent visit there, called our attention to his heard of 100 head of hogs, which were fed solely on alfalfa hay. They were generaly good stock though none thorough-bred, and all were in fine condition. The hay was hauled daily and fed to them after the first of the January. Some of the finer bred animals were fattened quickly into excellent pork. As the hay cart was seen by them coming to the lot they run to the fence like a lot of calves, and eat the fresh hay with as much avidity. The hay was cut and 500 tons stacked and covered with tule. The experiment of Judge Dixon had its which were origin in the fact of the hogs, running in the alfalfa field, leaving the green clover and feeding daily at the stacks of dry hay. The result establishes the truth of our frequent statements that hog raising on the Island is destined to become the most prominent and productive branch of farming. It would be almost impossible to estimate the possible increase with the unexampled facilities for growing them at a trifling cost. The pork, when made from hay, partakes very much of the character of grain fed meat, is solid and sweet, making first quality bacon and hams. Every farmer will find it to his interest to cut at least one crop from his field for hay fattening of his hogs in the fall.—*Southern Californian.*

Breeding Young Sows.—The practice of breeding from young sows is a common one in all sections. At first no bad result may show, but the practice is a bad one, nevertheless. Common sense is against it, for no animal should be allowed to breed until the carcass is fairly devoloped. The practice should be utterly condemned. If continued in the family for a few generations of swine they will be found to dwindle down from three to four hundred pound hogs to animals that will weigh only two or three hundred pounds. It is much better to keep the sows three or four years, and even much longer. Sows have been kept for fifteen years to advantage. Swine are several years coming to maturity. It is a fact well known, at least to every Irishman from the "ould country," that pigs from old sows will grow some thirty or forty pounds heavier than those from young ones. While shotes are growing, the sows should not be allowed to breed until the live weight will exceed one hundred and fifty pounds.

Keeping Boars.—We read about the care bestowed upon stallions, rams and other breeding animals, but rarely do we ever see a word on the care of boars. They are usually raised with breeding sows, and run and worry and become nothing but ruins. They go days without food. They disappoint their owners and everybody else. Now, it is just as important to take care of a breeding hog as it is of a horse, and a good, snug pen or yard should be used to enclose them. They can be well fed here, and made to grow; and if their services are needed, it is easy to have a door or gate to let breeding stock in. If this plan is followed, one will have a far better stock. The slops of the kitchen, sour milk, vegetables, bran and soaked corn can be fed to him, and he will be a credit to all concerned.—*Rural World.*

Another Premium Essay Wanted.

Editor California Agriculturist and Live Stock Journal, San Jose, Cal.:

The object of the American Berkshire Association is to revise, preserve and publish the pedigrees of pure-bred Berkshire swine; also to collect and disseminate information calculated to advance the interests of swine breeders generally.

In furtherance of a part of its work, and in view of the favor with which the premium essay on the origin, breeding and management of Berkshires was received, the Association has decided to offer another premium of $100 for the best approved essay on the Diseases of Swine, their Causes, Preventives and Remedies. Said essay to be practical and exhaustive. The competing essays to be forwarded to this office on or before the 1st of January, 1877. The award will be made and the money paid at the annual meeting in February following. All competing essays will be the property of the Association.

Competition is invited from all practical men who have given attention to the diseases to which swine are subject. Prof. Law, of Cornell University, N. Y.; Prof. Smith, of Toronto Veterinary College, Canada; Hon. T. C. Jones, of the "National Live Stock Journal," and E. G. Bedford, Esq., of Kentucky, have kindly consented to act as the Awarding Committee.

The premium essay will appear in Vol. II. of the American Berkshire Record, now in course of preparation, the pedigrees for which, as fast as approved and certified, have record numbers assigned them, and certificates of registry forwarded to the parties entitled to the same, in advance of publication in Vol. II. Address,

Sec'y American Berkshire Associat'n,
Springfield, Illinois.

An educated hog at one of the watering places is said to be a good mathematition. No doubt it excels in a "square root," and is also good at "subtraction" when in a turnip patch.

The Pig's Start in Life.—The pig is an animal that has its wits about it quite as soon after birth as the chicken. I therefore selected it as a subject for observation. The following are some of my observations: That vigorous young pigs get up and search for the teat in one, or within one minute after their entrance into the world; that if removed several feet from their mother, when aged only a few minutes, they soon find their way back to her, guided apparently by the grunting she makes in answer to their squeaking. In the case I observed, the old sow rose in less than an hour and a half after pigging and went out to eat; the pigs ran about, tried to eat various matters, followed their mother out and sucked while she stood eating. One pig I put in a bag the moment it was born, and kept it in the dark until it was seven hours old, when I placed it outside the sty, a distance of ten feet from where the mother lay concealed in the house. The pig soon recognized the low grunting of its mother, went alongside the sty struggling to get over or under the lower bar. At the end of five minutes it succeeded in forcing itself through under the bar at one of the few places where that was possible. No sooner in than it went without a pause into the pig-house to its mother, and was at once like others in behavior. Two little pigs I blindfolded at their birth. One of them I placed with its mother at once; it soon found the teat and began to suck. Six hours after I placed the other a little distance from the sow; it reached her in half a minute, after going about rather vaguely; in half a minute more it found the teat. Next day I found that one of the two left with the mother, blindfolded, had got the blinders off; the other was quite blind walking around freely knocking against things. In the afternoon I uncovered its eyes, and it went round and round as if it had had sight and suddenly lost it. In ten minutes it was scarcely distinguishable from one that had had sight all along. When placed on a chair it knew the height to require considering, went down on its knees and leaped down. When its eyes had been unveiled twenty minutes I placed it and another twenty feet from the sty. The two reached the mother in five minutes and at the same moment.—*Popular Science.*

Lice on Swine.—The general cause of lice on swine is uncleanliness in one or more of the departments of swine management. It is very seldom a healthy, thriving pig, one who has been supplied with good food and a plenty of it, and has been assigned comfortable quarters, which are regularly and properly cleaned, is troubled with lice. Sometimes it happens that they get the lice from less favored brethern, and I have them on my herd by bringing them in with a splendid pair of young Berkshires I bought in the West. If lice are left to worry and irritate swine, they do not do as much good as they should on a given amount of food, and it should be the aim, therefore, for all good breeders to remove them as quickly as possible. Our first experiment in removing lice was tried on the above mentioned young Berkshires. We took some common coal oil and poured it along the pigs' backs until it spread over the whole body. We saw but few lice the next day, but thought best to repeat the dose, which was done three times more. The lice of conse, left for unknown parts, but the worse of it was the pigs lost their hair, the sow losing all of it, owing to having too much coal oil. One application would have removed the lice and not injured the pigs. Sulphur and lard rubbed on the pig is an excellent remedy, as is a dose of sulphor in the feed if the weather is warm, as it works out of the skin and proves very unpleasant to the parasites.—Ex.

The Berkshires.—The friends of the Berkshire breed of swine claim:

1st. That they have more constitutional vitality, and consequently are less liable to disease than any other breed.

2d. That they are more prolific, and that the pigs are more uniform in size, color and form, and consequently produce more saleable pigs than any other breed.

3d. That their flesh is finer, firmer, and of higher flavor than any other breed.

4th. That they furnish the finest and best hams, shoulders and bacon of any other breed in the world, and in England their meat brings a higher price than that of any other breed, on account of its superior excellence.

5th. That they are the best breed for the western farmer, being active, seeking their own food, keeping in excellent order on grass or clover, and fattening early and readily on less food than almost any other breed.

These excellent qualities the breeders of Berkshires believe they possess, and they think it is only a question of time when they will supplant the other breeds.

Stock Breeder.

LIVE STOCK FARMING.

LIVE stock farming is the most profitable of any branch of farming. If the majority of our farmers realized the importance of this matter, we feel sure they would do differently and reap the reward of a wiser discresion. In England, where farming is conducted on the most economic principles, and the art and science of farming is most thoroughly understood, it is found that live stock farming pays better than the raising of produce for market. This, where the land is high and where a dense population is to be fed from the soil. How much stronger will the same rule apply to our State, where a surplus of grains are produced at low prices, and where beef and pork are always cash? The Chicago *Live Stock Journal* says that in this country a very large increase in live stock upon American farms would be attended with even greater profits than the English farmer can reasonably expect from the same source. There is not only a general impression among intelligent farmers that this is so, but experience has shown that live stock in some form is the most profitable interest to which the farm can be devoted. Those who make live stock their specialty, devoting to it so much of their resources and attention as circumstances will admit, are the most thrifty and successful of our farmers. And here we are not speaking merely of those who make a specialty of breeding thoroughbred stock to be sold again for breeding purposes, but of the great body of farmers, who produce horses for labor, cows for milk, cattle and swine for the butcher, sheep for wool, etc.; in other words, animals for consumptive purposes. Every ambitions farmer should be alive to such facts as these, and hasten to make the most of knowledge of the principle. Stock farming requires closer attention, to make the most out of it, than any other department. The right number, kind and variety of stock to keep to consume the products of the farm economically, the proper time to fatten and to sell to best advantage, as well as to the breeding and keeping of young stock, all demand proper management. A few mistakes in such matters make a great difference in the matter of profits. The expense of starting into the business may deter many from at once entering into the business; but to start with *young* stock requires little capital, and soon the growth and increase will begin to pay. A farmer should be willing to invest all his earnings for a few years into something that will put him in a prosperous condition and increase the value of his business and farm. In no way can he do this better than in the raising of such stock as is best adapted to his farm, and cultivating the soil to produce feed for his stock. The old style California cattle or sheep ranching over thousands of acres of wild lands, never cultivating a foot of soil for feed, is uncivilized and undesirable. The proper way to do is to produce upon the soil as much good, solid feed as possible, constantly enriching the soil by utilizing the manure. A farm well fixed for stock-raising should be fenced in apartments so that a system of rotation can be conducted, and hay fields, grain fields, vegetable fields and pastures be apportioned as will best suit convenience and prosperity. Facilities for irrigation will treble or quadruple

the amount of produce to the acre suitable for stock feed. Once well fixed for stock farming, the farmer is not only independent but in a way to become wealthy without working himself to death. When grain-growing runs farmers in debt it is time to *think* about making such a change as will prove beneficial.

A NEW AND LIMITLESS OUTLET FOR AMERICAN BEEF.—In our Monthly Report for June, page 203, under the head of "Fresh beef in London from the United States," is a paragraph describing the conditions under which fresh beef, in quarters, has been safely transported across the Atlantic in the winter months. Subsequent advices reports that the newly discovered and patented process of preserving without any chemical appliances, and transporting unimpaired, fresh beef by simply suspending it in th atmosphere from which moisture is expelled and kept at a uniformly cool temperature, proves equally successful in the hottest weather. The Agricultural Gazette, speaking with reference to the London market, states: As we are now in receipt of an average weekly supply of some 400 tons of American beef, which, after being killed and packed about fourteen days in extreme hot weather, arrives quite sound, we may reasonably expect in the winter a very much largea supply. The herd and flock master of England will perceive that it is always possible that the impossible may happen. An unexpected revolution in their industry suddenly competitions, is in a moment dispersed, and the market thown open to the productions of the wibe, interminable pastures of the New World.

A correspondent of the Gazette indorses its frequent commendations of American beef, and states that in spite of the extreme temperature of the week ending August the 19, meat from the Western prt of the United States in the shambleat at Newgate was in as perfect condition as that taken up during the fourteen days since it was slaughtered. The development of this trade astonished the English people. The first trial cargo arived at Liverpool last Christmas, and its reception by the British meat consumers caused a rapid enlargement of the trade which has failed to meet the increasing demand on account of the necessary delay in fitting up the holds of vessels for its transportation. This American meat compares favorably with that of English production, much of which, according to the aforesaid correspondent, is of inferior quality. A great deal is artificially fed, producing an under proportion of fat and lean from the use of oleaginous foods. Such meat will not be able to compete with the American grass fed bullock.—*Agricultural Report for September.*

WASHINGTON TERRITORY CATTLE IN CHICAGO.—The Chicago *Brewers' Journal* says that large numbers of cattle are annually driven to the Union Pacific Railroad, some six hundred miles, and shipped to that point. It notes the arrival of some three thousand head "heavy, coarse cattle, but certainly showed well as to flesh, considering the hard usage they had to undergo in walking the long journey."

THE MOST PROFITABLE STOCK.—The Journal of the Royal Agricultural Society of England gives the results of inquiries put to seventy farmers as to the relative profits of raising horses, cattle and sheep. The preponderance of testimony is that raising horses, except for arm use, does not pay, and that farm horses can be raised cheaper than purchased. That when grass land is adapted to it cattle raising is advisable, feeding so as to turn them off for beef at two years old or a little more. That sheep are the easiest turned of any stock, more easily managed, and with far less labor.

HEIFERS SUCKLING THEIR CALVES.—The agricultural editor of the Connecticut *Courant*, having been criticised for recommending that heifers should always be allowed to suckle calves, gives the following reasons for this recommendation:

Our position in regard to suckling calves upon young heifers—their first one or two calves say—is that this natural action encourages the mothers in giving milk. The idea may seem novel to some, and then there is a difference in heifers. Some are more "foolish" and sentimental concerning their offspring than others. In breaking a heifer to milk I am apt to mix in with her calf a good deal, endeavoring to associate myself in the minds of both as a familiar object, so that my little stripping passes as a matter of course among the new and bewildering circumstances. Barring the opinions that may entertain among the selfish and short-sighted against the policy of developing the lacteal secretions in this natural manner—by allowing a heifer to "fuss around with a young calf"—the plan must look quite reasonable. It is certainly a time-honored practice among careful farmers, and a good deal of observation and some experience will warrant me in asserting that early indulgence in the cares of maternity is no detriment to the future productiveness of the grown-up cow. After three or four years of age, when the milking habit is formed, calves may be "deaconed" with less feeling on the part of the mother She is used to the hand of man, and becomes by habit reconciled to her lot.

THE opinion prevails with many persons that steers are more profitable than cows. The *Live Stock Journal* has a word with them and says: "If cheese is made, the ordinary cow will produce 1,600 pounds in four years, which at 12 cents per pound, will amount to $192. If butter is made, 600 pounds will be the product of four years, which, at 30 cents, will amount to $180; and 800 pounds of pork to $64 more—making the income from an ordinary cow for four years, in butter and pork, $240. Now, if we estimate that it costs $10 more in labor to milk the cow and work up the product than to take care of the steer, we must deduct from the product of the cow $40—reducing the butter product to $200. Now, the steer dressing 800 pounds will weigh 1,400 pounds on foot, and sell say at 6 cents, or $84; thus giving a cash product of less than half of the butter product of the cow."

THE Kentucky *Farmers' Home Journal* says: When the South takes to stock-raising, and the important relation which stock bears to a higher and more profitable agriculture than that thus far practiced, becomes properly understood and appreciated by the Southern farmer, then, indeed, the North will be nowhere by the side of the South.

For the removal of a savage bull, says a correspondent of the London Agricultural Gazette, have a girth around behind the shoulders, but in place of the rope being fastened to the ring, fasten it securely to one of the forelegs, just above the foot; then, when the bull attempts to run at the men that are leading him, the man behind pulls the rope, and down comes the bull on his knees. I have seen one of the savagest bulls tamed by bringing him a few times to his knees; and another advantage is, the pressure is not all on the ring.

Household Reading.

The Old Homestead.

When home the woodsman plods with ax
  Upon his shoulder swung,
And in the knotted apple tree
  Are scythe and sickle hung;
When low about her clay-built nest
  The mother swallow trills,
And decorously slow, the cows
  Are wending down the hills;
What a blessed picture of comfort
  In the evening shadows red
Is the good, old-fashioned homestead
With its bounteous table spread.

And when the winds moan wildly,
  When the woods are bare and brown,
And when the swallow's clay-built nest
  From the rafter crumbles down,
When all the untrod garden paths
  Are heaped with frozen leaves,
And icicles, like silver spikes
  Are set along the raves;
Then when the book from the shelf is brought
  And the fire lights shine and play—
In the good, old-fashioned homestead
  Is the farmer's holiday.

—[Alice Cary.

UP-COUNTRY LETTERS---NO. 9.

BY RACHEL A. ELY.

SITTING under a tree, with the cool breezes fanning my cheek and lifting my short hair playfully, my book drops into my lap and I gaze into the faraway landscape of broad valley and dim, distant mountain beyond, reaching miles away into melting space. Far back of my mountain home rises a hill that I longingly wondered when I came if I should ever climb its rugged sides. Now behold me its daily visitor, for I find renewed strength coming to me by *using*, and not *abusing*, what I gain. Sometimes I come alone, and often the children accompany me. But peace seems to reign supreme here, and my very breath is deepened and voice strengthened on its hight.

Finding a shady spot, I spread my "comfort" (a blessing to invalids, and made of two thicknesses of calico with wool between, tucked, and only wide and long enough to lie upon, very light to carry and easily made) and am at rest. How different from the "rest" the tired city folk usually take when they go to the mountains or the coast. I tried the coast one year, and never had a more tedious trip in my life, while others worked twice as hard as I to enjoy themselves, with no better success. One is either a slave to dress or feels shabby beside others, neither of which conditions is agreeable. My wonder is, how a woman can develop any great degree of intellect, fettered and bound as she is by fashion and dress. Even as school girls their thoughts and minds are dwarfed, in a measure, by the constant drain their dress has upon them.

My hostess feels sure the question of dress is one of vital importance in the future elevation of woman—explaining how the physical and mental strain is liable to produce moral weakness, and tends to make our girls weak and vain, as well as invalids to a certain extent. Oh, for the voice of an orator to speak to woman on this subject, of all others most thought about and least understood!

I see in your columns, Mr. Editor, an advertisement for the "combination underclothing" for women. They are, indeed, invaluable, and I can speak from experience. My hostess having got patterns, we are all wearing them, little children as well as the *father*, who says they are quite the thing for men to wear; and I would suggest to Government that soldiers adopt them, in place of the separate drawers and shirt they now wear, as the combination suit is more comfortable, cheaper, and more easily put on.

Turning my gaze in the direction of our sick woman's home and seeing the blue smoke rising from the chimney, reminds me that I have not mentioned her complete recovery. While the farm which they would give to make her well is still theirs, the overflowing gratitude of both husband and wife is bestowed upon my kind hostess for her great care and untiring attention for so many weeks. And when hope again began to light the calm face of the husband as he saw the gaining strength of the mother of his children and felt that her life was saved, his praise was loud and earnest, not to God alone, but to his little quiet little neighbor whose short hair, short dress and M. D. attached to her name he had so often before smiled at as *strong-minded* and *not womanly* enough for *him*. *Now* he is converted (as am I also) to the Divine help, *through* men or *women*, to do His will in any way they best can. Silently, quietly, and *without pay*, did this good woman go to work to save the suffering woman, and succeeded in spite of obstacles and the shrugging of the shoulders of the drug doctor who gave her up to die. And, verily, she hath her reward, but not in *money*. The husband is "put about," he says, to pay the drug bills and the doctor (who did not cure), and my hostess is glad to be charitable if they are willing to change their mode of life and learn how to keep well in future.

MORAL OF DANCING.

Prevents Suicide and Insanity.

BY A. G. S.

The Terpsichorean art is a reaction and an accomplishment of grace and gentility, cheap and easy to indulge, and needful in farmers', mechanics' and workingmen's homes to remove the cheerless monotony and prevent the nervous depression, discouragement, despondency, suicide and insanity sometimes resulting from dreary and drudging isolation. Such genteel and orderly exercise is altogether delightful, exhilerating and healthful. Nothing is more pleasant, inspiring and attractive in social gatherings, or tends more to unite and harmonize the hearts and hands of the people and to develop the finer elements of human nature. There is no sin in it; but its moral advantage requires proper management and supervision.

Avoid the excesses of cost, and late hours; abstain from liquors, and from chewing and smoking tobacco, and observe modest and quiet manners. Small companies and family circles are always preferable to large crowds and noisy and rushing hotel balls, which incline to be fast and boisterous. To

"Dance all night, till broad daylight,
  And go home with the girls in the morning,"

Is often quite coarse, wild and extravagant, and lacks the refining and civilizing influence of smaller groups of acquaintances and friends. But to call neighbors together at their own retired homes for three or four hours, at little or no expense, for the varied pleasant exercises of the dance, the waltz, the singing of good songs, conversations and declamations, perhaps, and the playing of inno-

cent and amusing games, is not only perfectly harmless but really charming and beautiful. The less the world has of gloomy, unhappy restraint, the better. Never turn a flower garden into a graveyard, but rather graveyards to flower gardens as far as possible.

To expend money for training mankind to be fearful, tearful, moaning and groaning, is pitiful and cruel. The object of life is happiness. Therefore, don't be miserable; but jump right straight out of that most foolish feeling at once. What's the use? Be glad you live! Catch the bright warm sunshine of joyous glee. Make the red blood dance in the veins, and the heart and feet to bound with love, affection and generous impulse. Call together the young and the old; stir up the stiff, frigid and stupid community; melt away all personal animosity and bitterness; tear down prejudice and unsocial division, and regard every workingman and woman as brother and sister—casting aside unmeaning names and distinctions. There is no virtue in them

Dance! Dance in the family, the grange, the sovereign lodge, the picnic! Dance on the holidays! Shake the people into closer unity! Organize in brotherly clubs, unions, granges and lodges for social strength and good cheer! Revolutionize! jubilate! hurrah! "Shake them up! shake them down! forward and back! cross over! down the middle! round outside! all hands round! swing six! balance all!" Dance the cotillon, the quadrille, the schottische, the Spanish. That's it. Now retire; it is twelve o'clock. Get a good rest and sleep; and what's the result? Don't every one feel better? Of course they do; there is no mistake about it. This makes the right sort of Shakers—that is, the *marrying* kind. Just think of it—the workers all becoming Grangers, Sovereigns and "Shakers!" They will capture the whole proud continent, sure. Such a method of life is a

GRAND PROTECTION

Against the blues, sulks, horrors, scandals and consequent neighborhood quarrels, suicides and the insane asylum. It is the power of social sympathy, needed by all. Therefore, let working people everywhere demand more time for thought, less for hard work, better wages, and more recreation and amusement. This is the kind of voice of all true religion, and of workingmen's politics. Call it the moral of dancing. Be happy, O good people, and leave off the whisky and lager beer. Do these drinks belong to temperance, or to true refinement and civilization?

Champlin, Minnesota.

SATURDAY EVENING REVERY---NO. 2.

BY M. E. T.

I think I am beginning to love these evening reveries. There seems to creep into them a kind of happy expectation, as though some bright idea would suddenly present itself and in some mysterious manner point out a means of deliverance from our present sad condition.

Our manner of living has become so complicated, so formal and exacting, that in order to reach the social standpoint our domestic comfort is made to suffer. I believe that it is Clarence Cook who says that "America is the only land known to geographers where the greater part of the population lives to please its neighbors." This is truly said of this particular class of people. Everything we do is made subservient to this important end; and so arduous has this labor become that we no longer find time for pleasant or profitable reading. We stint and deny ourselves in the way of books and magazines, while the dimes that would get them go for a new set of china, a new bonnet or some fine lace trimming, "just like Mrs. B's." We say to our accusing conscience, "O well, I never have time to read nowadays;" but we find time to ruffle and tuck and puff, to the space of two weeks' work on one dress, because our friends in the set to which we belong expect it, and we must do as they do. We forget that they are able to indulge in these extravagances without discomfort to themselves or injury to any one. Just here a great error arises from our agonizing efforts to cope with the mighty odds that money brings; but I must beg my readers to wait for another *revery* in which to immortalize my subject, since I suddenly remember a visit to San Jose to be made on Tuesday next, and in the meantime I must finish a new suit, which, in order to be perfect, must have a ruffle and puff on the lower skirt, a puff and ruffle on the overskirts. There are many bias bands, and six dozen buttons to set on; all this, and only one day in which to get ready. After my visit, and in my next revery, I shall attempt to gather up the tangled thread and proceed with the trials of us "Poor but respectable people."

FURTHER FROM "GRANDPA" ON THE "SUPREMACY" QUESTION.

Grandpa is glad to have drawn this expression from "Girls' Rights" pen: "Yes, that is right." The legitimate boundary to which it alludes is *love*, pure, holy love. There is also a legal boundary which Grandpa is not so able to define, but he would point "Girls' Rights" to a case now on hand, where the masculine is at present, and has been near, if not quite, two years confined in the San Jose jail, all through that masculine supremacy not having been exercised as it should have been. (The case is that of Mr. A——ys.) Who does the law regard as the supreme head, the responsible party? Who does it take hold of and incarcerate in prison if not submissive to its dictates, as in the case mentioned? True enough, husbands are liable to err, by which fortunes are lost, wives brought to poverty, etc. But, dear "Girls' Rights," would the world be saved from these disasters by reversing this "supremacy" question? No danger, where love is kept, as it should and ought to be; but *mutual rights* and concessions will have also. As a usual thing, it is "the husband's home and business the wife comes to, and he only is competent to judge, &c., viz: whether as farmer he shall live on his farm or in the city; as blacksmith, near his shop or in a fine house in the suburbs. If these are extreme cases, they have their parallelisms on a small scale. Grandpa, in the course of a long life, cannot call half a dozen cases to mind where it was been the other way, i. e., where the wife has taken the husband *to her* home and business, &c. One case of this kind is on his mind, and worthy of mention because of its happy results. Dear "Girls' Rights," go do likewise. This was a case of a lady conducting a prosperous private seminary, owning the house and home where she lived. She married the gospel minister of the place, and he came to *her* home and surroundings, she retaining precisely the su remacy she had always held: and a very happy union it was till death severed the tie. This, so unusual a case, is neither a rule nor a criterion. Thanks to "Girls' Rights" for another sentence: "Why, then you need not ask any more." Just so; and that is what the darling Angie comes to if we can only keep up the love principle where it *ought* to be and has a *right* to be—on both the masculine and feminine side. Then, with judicious care and discretion, the financial affairs will be known; the comfortable house and buggy come in due season, and all jars and discords be now and forever avoided.

P. S.—The feminine supremacy was also acknowledged. Will not "Girls' Rights" give us something on that part of the subject? GRANDPA.

Domestic.

The Maiden's Choice.

Oh give me the life of a farmer's wife,
In the fields and woods so bright,
'Mong the singing birds and the lowing herds,
And the clover blossoms white;
The note of the morning's heavenward lark
Is the music sweet for me,
And the dewy flowers in the early hours
The gems I love to see.

Oh! give me the breeze from the waving trees,
The murmur of summer leaves,
And the swallow's song as he skips along,
Or twitters beneath the eaves;
The plowman's shout as he's turning out
His team at setting sun,
Or his merry good-night by the fire-fly's light
When his daily work is done.

And give me the root and the luscious fruit
My own hands rear for food,
And the bread so light and honey-white,
And the milk so pure and good;
For sweet the bread of labor is,
When the heart is strong and true,
And a blessing will come to the hearth and home,
If our best we bravely do.

FAMILIAR TALKS---No. 13.

BY SNIP.

NOW that the heated, busy term of the year is past, I hope the Domestic Department of the Agriculturist will be better patronized by correspondents than it has for some time back. Has "Ansie" despaired of hearing from us? I hope she has not kept those *doughnuts* waiting till now, not knowing what to do with them. Well, my dear "Ansie," I must plead ignorance of the "black art" that would enable me to cook without flour. Gladly would I impart to others the knowledge did I but possess such a secret. Not only would it lessen house hold expenses, but were there only one-half the amount of flour consumed that now is, there might be *more diversity in farming*. There would be fewer men who would put in a great quantity of wheat, and then hang around the saloons, living on the interest of the money they "expect to get" for their crop. But to return to those unfortunate doughnuts. I seldom measure flour for doughnuts, and never for cookies—using for both just enough to make them roll out.

As the season for mince pies and fruit-cake is drawing near, perhaps a receipt or two will not be amiss. This receipt

FOR MINCE-PIES

Is good, though if any ingredient is objectionable it can be omitted: 1 pound of roasted or boiled beef; ½ peck of apples; 1 pound raisins; ¼ pound currants; 1 nutmeg; 1 tablespoonful of ground cloves; 2 of cinnamon; 1 pound sugar; the grated rind and the juice of 2 lemons. Moisten with cider and let it stand over night, or longer if you wish. When su d, put in two ounces of citron, y thin strips. Th s for half a pound this necessitates having the pies hot when eaten, and all do not like them so.

WHITE MOUNTAIN CAKE.

Four eggs, well beaten with 2½ cups of white sugar; 1 large cup of butter; 1 cup of sour milk; 1 teaspoonful of soda; 5 cups of flour; 1 teaspoonful of vanilla; 1 of lemon; 1 heaping cup of raisins (whole without stoning); ½ cup of candied orange peel and citron sliced; ¼ cup of almond ments sliced. This amount will make two common-sized cakes.

ORANGE CAKE.

Two cups of sugar; 2 cups flour; 1 small cup of butter; ¾ cup of water; yolks of 5 eggs; whites of 3 eggs; 1 teaspoonful of cream-tartar; ½ teaspoonful of soda; the juice and grated rind of one orange (or of a lemon). Beat the yolks and sugar together, and add the whites beaten to a stiff froth; then the other ingredients. Bake in jelly-pans. Add the juice and grated rind of an orange to the whites of two eggs; add white sugar to make sufficiently stiff to put between the cakes when they are cold.

WASHING FLANNELS.

BY ANSIE.

I have had some experience in washing flannels, and observed one or two important facts that most people seem to overlook. I think it better to wash them in cool water, as they will shrink just the same from being hung out in the cold air after washing in hot water, as they will from being put from cold to hot water, or from hot to cold water. The object is to secure a *uniform temperature* from the time they are wet until dry, and also each time they are washed. Washing in cold water one week and the next week in hot water also causes shrinkage. White flannels and merinos look better if a little ammonia is added to the wash-water. I have never tried borax water, excepting for black silks. It is good for silks. Silks also are very much improved if ammonia is added to the water they are washed in. Both silks and flannels should be washed in water that has not been used for washing other clothing.

[Following we append several recipes upon this subject, selected from various sources.—Ed.]

Washing Woolens.—The secret of washing woolen goods successfully lies in avoiding rubbing, which shrinks or fulls the fabric. Many washers advocate scalding water for white flannels; others are equally enthusiastic over the advantages of cold water, but all agree that rubbing is detrimental. The rinsing water should be of the same temperature as the suds, whether that be hot or cold, and the wringing should leave as little water as possible in the goods. Colored flannel should not be scalded, but washed in suds as hot as the hands can bear and rinsed in clear water. The garments should be wrung as dry as possible with the hands, then wrung again in a dry towel and dried quickly by the fire to preserve the color. Small articles may often be ironed without previous drying.

Washing Fine Underclothing.—A leading firm, importers and retailers of hosiery goods in Philadelphia, gives the *Germantown Telegraph* the following directions for washing merino lamb's wool and silk underclothing, and that paper bears witness to its excellence: "Use one pound of dissolved soap in four gallons of warm water, in which well rinse the articles to be washed, drawing them repeatedly through the hand; wring them as dry as possible to remove the soap;

rinse them again briskly in clean luke-warm water: wring and stretch to their proper shape, and dry in the open air if possible. The only effect of rubbing is to shrink and destroy the material; it should therefore never be resorted to. The material used in manufacturing silk underwear being no animal product, it is absolutely necessary that nothing but the best quality of soap and warm water should be used. All kinds of washing compound destroy the nature of the material, giving to the fabric the appearance of poor cotton."

Cleansing Blankets—It is quite as important to have the blankets on our beds clean as well as to have the sheets pure and white. "Put two large tablespoonfuls of borax and a pint bowl of soap suds into a tub of cold water. When dissolved, put in a pair of blankets and let them remain over night. Next day rub and drain them out, and rinse thoroughly in two waters, and hang them out to dry. Do not wring them."

Durable Bedding.—A woman who has raised a large family recommends housekeepers to the good quality of unbleached cotton, run the breadths for top and lining of quilt, and color it with any cheap domestic dye—such as japonica annatto, white oak or any such thing. Quilt them coarsely, and put more cotton batting in than would be needed for ordinary bed quilts. They will wear years longer than ordinary new calico, and are especially to be desired in large families of boys. If desired, outside spreads may be made of more fanciful material.

Beneficial Effect of Flannel—The majority of people are not aware of the beneficial effect of wearing flannel next to the body, both in cold and warm weather. Flannel is not so uncomfortable in warm weather as prejudiced people believe. Frequently colds and constant hacking coughs have left me since adopting flannel garments. There is no need of great bulk about the waist which condemns the wearing of flannel to those who prefer waspwaists to health, for in that case flannel can be cut as loosely fitting waists, always fastening at the back. There are scarcely any of the bad effects of sudden changes of weather felt by those who wear flannel, and mothers, especially, should endeavor to secure such for their little people in preference to all those showy outside trimmings which fashion commands. —*Ex.*

MOUNTING CHROMOS.

Large chromos should be mounted on a stretcher. A stretcher is made of strips one and one-half inch wide, ripped from common inch or ¾-inch lumber, mitered and made into a frame. Stretch upon this, pasting or tacking smoothly, tightly, over the whole face of the stretcher frame a piece of light domestic. Common flour paste, made smooth, is suitable to use for mounting the chromo upon the stretcher. Of course the stretcher must not be any larger than the picture. Paste both the back of the picture and the cloth, and lay on and rub with a damp cloth till it is smoothly adhered to the stretcher. The drying will shrink the cloth so that no wrinkles will appear. Before varnishing, the first and most essential operation is the proper sizing of the paper, as, if this be imperfectly done, almost any kind of varnish will penetrate the paper so as to make oil-spots. Glue-water of the proper consistency is the best protective against the absorption of the varnish. It should be of the right strength, however. If, after being dried, it cracks in bending a corner of the paper, it was not diluted enough. When dry, the map or chromo is varnished with a solution of mastic, sandarac, or some other colorless resin in turpentine or alcohol, or a mixture of both; experience shows the best consistency in order to lay it on evenly with a brush.

A good varnish can be purchased at paint stores. Use none but the best quality for chromos. Small chromos may be mounted on pasteboard and varnished the same. Chromos may also be framed under glass, without mounting or varnish, the same as engravings, if one prefers it.

HOME-MADE PICTURE FRAMES.

Frames for pictures can be made of a great many materials. If tastely made, it matters little what is used. Acorns, with leaves made of leather, in imitation, make beautiful frames when neatly arranged and varnished. We have seen pretty frames made of rice fastened thickly to plain, beveled boards with glue and varnish; also of beans, pebbles, shells, etc. Rustic frames can be made of bits of wood tacked on a rough board frame and varnished. Choose gnarled roots and limbs, remove the bark, split in halves, all arranged flat side to the board in any shape that taste may suggest. Stain or not as you choose, and varnish. Do not mix too many things together. A frame of shells should be all shells; of rice, all rice, etc. A rustic frame may be made of knotty material and be made to resemble coral work.

To make artificial coral, take two drachms of vermillion, one ounce of rosin, and melt them together. Have ready the branches of twigs, peeled and dried, fasten in any shape desired with pins or small nails, and paint them over with this mixture while hot. The twigs being covered, hold them over a gentle fire, turning them around until they are perfectly smooth. White coral may be made with white lead, and black with lampblack. Another way is as follows: Pound a quantity of good red sealing wax and mix with spirits of wine into a thick paste. Into this put some large, unbroken Carolina rice, stir well, and if it is of proper consistency every grain will be entirely covered with the paste. With this you can paint frames, card-baskets, brackets made of pasteboard, etc. Varnish, and you will be pleased with the effect.

Here is how to make pretty corn-husk frames: "Corn-husk frames may be made very prettily and simply by taking pasteboard or thick paper to sew the husks on. Then select your husks; take fine, white ones, but not the finest. Take a husk and cut it into strips three-quarters of an inch wide and three inches long. Then double it together in a bow as in tape trimming. Put two rows of these bows around the inside of the frame. Next cut a piece the length of the bows and the width of the husks, and bend the two ends together. Now take your needle, and stit it very fine through the center, and then sew the two ends that you hold in your hand on the frame overlapping the row of bows, one row of this slitted work, and turn and go lengthwise of the frame not crosswise as before. That forms the outer edge of the frame. Take a thin piece of board and make a frame. Place your glass between your paper frame and your board frame, and tack or paste your paper frame down smoothly. You will then have a nice rustic frame. Beautiful little card-baskets and lamp-mats may be made in nearly the same manner."

Rustic frames, skillfully designed, made of all the different varieties of burrs; of all varieties of mosses; of nut-shells, every kind; of stones, all the prettiest pebbles that can be found, look much better than to have a mixture of everything that can be available for fancy-work frames.

Persons wanting walnut or gilt frames will please notice our offer in an editorial note.

SEASONABLE SELECTIONS.

How to Carve and Help at Table.—It is considered an accomplishment for a lady to know how to carve well at her own table. The carving knife should be sharp and thin.

To carve fowls (which should always be laid with the breast uppermost), place the fork in the breast, and take off the wings and legs without turning the fowl; then cut out the merry thought, slice from the breast, take out the collar bone, cut off the side pieces, and then cut the carcass in two. Divide the joints in the leg of a turkey.

In carving a sirloin, cut thin slices from the side next to you (it must be put on the dish with the tenderloin underneath) then turn it, and cut from the tenderloin. Help the guests to both kinds.

In carving a leg of mutton or ham, begin by cutting across the middle to the bone. Cut a tongue across and not lengthwise, and help from the middle part.

Carve a fore-quarter of lamb by separating the shoulder from the ribs, and then divide the ribs.

To carve a loin of veal, begin at the smaller end and separate the ribs. Help each one to a piece of kidney and its fat. Carve pork and mutton in the same way.

To carve a fillet of veal, begin at the top and help to the dressing with each slice. In a breast of veal, separate the breast and brisket and then cut them up, asking which part is prefered.

In carving a pig, it is customary to divide it and take off the head before it comes to the table, as, to many persons the head is revolting. Cut off the limbs and divide the ribs.

In carving venison, make a deep incision down to the bone to let out the juices, and turn the broad end toward you, cutting deep in thin slices.

For a saddle of venison, cut from the tail toward the other end, on each side, in thin slices. Warm plates are very necessary with venison and mutton, and in winter are desirable for all meats. —*Ex.*

Pumpkin Butter (Original).—Cut up as much pumpkin or squash as desired, and cook without paring until tender. Strain or press the juice out; then pare other pumpkin and cook fine in the same juice. When thoroughly stewed down to about the consistency of apple, put away in jars the same as other preserves, to be used as other sauce, or may be used in pies without sweetening.

Here is another way: A writer who has tried it, says to preserve pumpkin, take seven pounds of pumpkin, five pounds of sugar, four lemons, and two ounces of green ginger root. Cut the pumpkin in slices half an inch thick in any desired form, square, round or diamond shape, and boil in the syrup till tender, then take up the pieces. Slice the lemon and ginger root very thin and scald them in a little clear water, after which add them to the syrup; boil the latter down until it is clear enough to keep without fermenting, and then add the pumpkin to it.

Stewed Fowl.—Fill the inside of a young fowl with oysters, put it into a jar or tin pail tightly closed, and put into a kettle of water. Boil an hour and a half. There will be a quantity of gravy from the fowl and oysters. Add to it a little flour made smooth in a small quantity of water, some butter, seasoning to taste, and more oysters with their liquor. Serve this with the fowl, which will be very white and tender. All the fine flavor in ordinary boiling will be preserved.

Meat Loaf.—Chop fine whatever cold meat you may have, fat and lean together, add pepper, salt and finely-chopped onion, two slices of bread which has been soaked in milk, and one egg; mix well together and bake in form. This makes an admirable tea or breakfast dish.

Pop-Overs.—Four eggs, four cups of fine graham flour, four cups of milk, or simply good milk and the best of white flour made into a rather soft batter. These may be baked in gem tins or gem irons, or small cups which should be previously heated. Bake in a hot oven and eat with fruit sauce.

Stuffino for Turkeys and Chickens. A handful of soaked bread squeezed dry, two eggs, a little finely chopped parsely, dessert-spoonful of ground ginger, a pinch of salt, a small bit of butter or beef dripping. Chickens or turkeys seasoned with ground ginger and salt, have a very delicate and rich flavor.

Sausage.—For 30 lbs. of meat, well cut, add 12 oz. fine salt, 6 oz. pulverized sage' 1 oz. black pepper, two tablespoons of mustard, summer savory to the taste.

Beet Vinegar.—Grate the beet, says the *Farmers' Advocate*, and express the juice in a cheese press, or in any other way that may suggest itself, and put the liquor in any empty barrel; cover the bung-hole with gauze; and set it in the sun, and in twelve or fifteen days it will be ready for use.

Bi-Sulphide of Carbon--Philloxera

From a paper read by Dr. Blake before the Acadamy of Science, we condense the following advice: Owing to the extreme volatility of this substance, its vapor, when it is introduced at some distance beneath the surface, would permeate the earth in all directions over a considerable area, and thus would have a chance of reaching even the distant rootlets of the vine. Although it had been reported in France that the substance was not destructive to the insect, yet I believed that the soft, apparently nude form, which I had just discovered, would not resist it. In order to introduce the substance beneath the ground, an iron tube was taken with a sharp steel point at one end, the side being pierced with a few small holes near the bottom, and a piston was made which could be forced down the tube. The tube was driven into the earth for a distance of two or three feet, near the root of the vine; some bisulphide of carbon was poured into the tube which was then filled with water, and the contents of the tube forced into the ground with the piston. The tube was drawn out and the hole filled up. The quantity used on each vine was about an ounce and a half of the bisulphide. This was introduced

nto the ground through two or three oles. The substance was applied in he end of April and early part of May, nly one application being made, and in very instance to plants that were evi- lently suffering from the disease. The esult has been, on the vines so treated he insect has almost entirely disappear- d, whilst on the vines that were in the ame condition last year as those to vhich the bisulphide had been applied, ont which were not treated, the roots warm with the insect, so that none of hem are likely to survive this season, t least of those that were most affected. The bisulphide of carbon can be ob- ained now in a comparatively pure state t about 50 cents per pound; and I am confident it can be produced in a form uite suitable for use in the vineyard at third of the price, so that the cost of he material for each vine would not ex- eed two or three cents. The refuse ime from the gas works will kill the in- sect for some distance beneath the sur- face when it has been applied round the roots, and from what we know of the natural history of the insect it is almost certain that it will shortly die out in any great depth, when it cannot be renewed by fresh nymphs developed from the win- er ova. During the winter, and as late as possible before the cessation of the rains apply three or four pounds of the lime refuse round the stem, drawing the earth away from the stem to the depth of two or three inches, at the same time brush- ing the stem for six or eight inches above the ground with train oil. Then about the middle of April to the first week in May use the bisulphide of car- bon under ground in the way I have pointed out.

RELIABLE SEEDS.

ONION AND CARROT SEED AT WHOLESALE PRICES.

Every person who has ever planted vegetables has had more or less trouble about procuring fresh pure seed true to name. Many of the seeds sold at stores throughout the country are grown with- out special care or selection of stock. Instead of the best vegetables being se- lected for seeds, frequently none but he refuse are thus used, and as a conse- quence inferior vegetables only can be grown from them. Seed growing is a profession that requires special care and skill. Pure seed, that is, seed that will bring varieties true to name, can only be grown from perfect roots, and away from other varieties, so there will be no mixture.

Mr. Wm. Clemence of San Jose, who we know to be thoroughly reliable, and who has for several years paid consider- able attention to seed growing, has pro- duced this season a quantity of pure Yellow Danvers onion seed, and of White Belgian carrot seeds. The on- ions were grown from pure seed, and none but the finest onions saved for planting for seed. They were all se- lected with care, and the seeds of this year's growing were produced far away from any other varieties, so there is no possible mixture. The same with the carrots—they are true to name.

We have made arrangements with Mr. Clemence for his entire crop of these seeds, to furnish to our subscribers. We will furnish, in packages of one pound or over, at the following rates:

Yellow Danvers Onion Seed—Per lb., postage paid, $1.50. Persons taking from our office, or by express at their own ex- pense, will be allowed postage rates—6 cts. per lb.—off.

White Belgian Carrot Seed—Per lb., postage paid, $1; or 16 cts. less if we pay no postage.

The yellow Danvers onion is the most compact, firm of flesh, and the longest keeping of any onion. There are many grown near San Jose every year for the San Francisco market. They often yield over one thousand bushels per acre when properly cultivated. The Eastern catalogue prices for seed per pound is from $3.75 to $4.00 and the California raised seed is the best in the world. Our subscribers will at once see the bargain and advantage we are offering them.

The white Belgian carrot is the largest and best producer known. The best stock carrot and the easiest harvested, the crop may be gathered by hand as nearly half the vegetable grows out of the ground.

The Eastern price for pure carrot seed is $2 per pound, double what we offer it for to our readers. All the seed we offer is fresh, grown this season (no old seed mixed with it), and will be put up in packages by Mr. Clemence to our order.

Our object in giving our readers the advantage of wholesale rates, is to oblige you and gain patronage for the Cal. Agriculturist. *Thorough surface*—not deep—*cultivation*, is the best for onions, and the sooner they are sown now the better. Carrots need a soilstirred a little deeper, but quite as thoroughly, and may be planted from now to first of February. Send in orders for seeds at once, as our supply is limited.

To Farmers.—The California Agriculturist is *your paper*, devoted *exclusively* to your interests; in its success is your prosperity. Assist us, then, by giving us for publication your experience in the different branches of farming, and by so doing make the California Agriculturist a public channel of communication for all the farmers throughout this and other Pacific States; and at the same time don't forget to make your neighbor suscribe; it is his interest to take a good agricultural paper, and it is to your interest, as a patron and friend of the paper, to have him do so.

Our Boys and Girls will probably feel a little disappointed this month, but we trust they will have patience when they learn that Aunt Polly has had sickness in the family. She sends her compli- ments, and promises a full department next month.

A Heroic Boy.—Freddie Tenny, of Alleghany, only ten years old, is a mate to the boy who stood on the burning deck, if somebody would only sing him into fame. His father and mother be- ing away for all night, Freddie was left to keep house and take care of his younger brother—a five-year old. Dur- ing the night Freddie was awakened by smoke and nearly suffocated. He saw that the house was on fire, the floor hav- ing caught from coals that had fallen from the stove in the dining-room. He gathered up his little brother and set him out in the cold, and then proceeded to carry water in a pail and put out the fire. He extinguished the flames, took his little brother back to bed, and both slept well till morning. In the morning Freddie called in a family who lived in another part of the house to see what happened. Two holes were burned through the floor—one two feet in diam- eter and the other one foot. The little fireman had saved the property, and probably some lives, and had all the fun to himself. He was charged to take care of his little brother and keep house, and he did it like a man.

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*Contributed. †Editorial.

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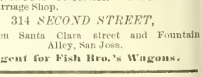

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A line will average about seven words. Count five words for the first line.

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☞ The unrivalled Guild pianos, 109 Stockton street, San Francisco, should arrest your attention. Don't think of investing in any other till you have seen these and learned the prices. You will find that first-class instruments can be obtained at prices that will astonish you.

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160 Acres near Saratoga, 80 acres valley, balance rolling land; house, high tight fence, 2 fields, running stream of water good orchard and house. A bargain for $6,500.

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AND

LIVE STOCK JOURNAL.

Vol. 7--No. 12. | SAN JOSE AND SAN FRANCISCO, CAL., DECEMBER, 1876. | Subscription Price, $1.50 a Year. Single Copies, 15 Cents.

FLAX CULTURE NEAR SAN JOSE.

If our farmers would get out of the rut of eternal wheat culture, and try a little diversity of cropping, they would find it to their advantage. Mr. J. H. Flickinger, who owns a fine large tract of land east of San Jose, has the past season, on 100 acres, produced 1220 centals of No. 1 flaxseed, worth 3¼ cts. per pound. The cost of cultivation was no more than for wheat. $39.60 cents to the acre is a good deal better than his neighbors have done with wheat, as all will admit; but still, little better than any of them might have done with flax, with proper care and culture. The flax was all contracted for in advance. The seed cost four cents per pound; 35 lbs. of seed to the acre is sufficient.

The oil mill in San Francisco has to import nineteen-twentieths of all the seed they use, owing to the stupidity of our farmers, who could grow it with profit by rotating with wheat and barley, making each crop better for the culture.

Mr. Flickinger kindly took us in his buggy on a bright, beautiful morning last month, to visit his farm, showed us all over it and told us much about his experience in farming. His farm lies adjacent to the mountains, and has a beautiful slope, commanding a grand view of our valley for a long distance. It is well watered with a living stream, is covered with a deposit of alluvial from the hills, and would make an excellent fruit farm, or several, as it contains near 1,000 acres. It was on this gentle slope that Mr. F. raised this crop of flax.

The following we give as his experience and dictation.

PREPARING THE GROUND.

He plows immediately after the first rains, turning under the newly sprouted weeds, plows well, and harrows immediately, and cross harrows, thoroughly pulverizing the soil, as the main feature is to mellow the surface for a seed bed. Then again in about two weeks, when the weeds and mustard are sprouted, harrows again twice, to kill all foul growth, when the flax is at once sown and well harrowed in. He sows 35 to 40 lbs. of seed to the acre. Light alluvial soil should be rolled after harrowing in the seed; but on heavy adobe rolling would be likely to do more injury than benefit.

TIME OF SOWING.

By all means sow early. In the interior counties, San Joaquin and Sacramento valleys, also the Santa Clara valley and Salinas valley, flax should be sown from the first of December to middle of January—not later than January 15th. Flax must make its principal growth before April 15th, to insure the perfect filling of the bolls, which should contain 8 to 10 plump seeds each. They must fill before the hot weather to obtain a large yield of good seed. By sowing early the flax will mature during the first hot weather, in April or May, and make heavy seed, rich in oil, whereas if the sowing is delayed till March the flax most make its growth during hot weather, and cannot evenly and properly fill and mature. Mr. F. sowed some flax this year as late as March, which was a failure. While some was ripening the rest was in blossom, and even now the old stubble is some of it green. The early sown all ripened together. Some farmers have objected to sowing early, on the ground that the frost will injure it. Mr. Flickinger declares that it is as hardy as wheat or barley in this climate, and that even if it were not, he should take the chances on early rather than late sowing.

HARVESTIMG FLAX.

The clipper is preferred for cutting the flax, as the most expeditious and cheapest mode of cutting and stacking. Reaping makes too much extra work in gathering and stacking, besides shattering out the seed in loading and hauling to the stacks.

THRESHING FLAX.

This is a business few farmers are familiar with, and one that requires particular attention to save the seed effectually. In the first place, you must not have less than eight rows of concaves in your cylinder, and they must be minutely adjusted and fitted, so as not to grind the seed. Then the thresher must be free from cracks or splits, otherwise the seed will run through like water and be wasted. The vibrator supplied with flax-seives—square mesh No. 7—is undoubtedly the best machine to do good work in threshing flax. It leaves the seed in a cleaner condition than any other requiring less after work in recleaning with the fanning mill.

FANNING MILL CLEANING.

One of the very essential things about flax growing is to put clean seed into market; No. 1, plump, clean, oily seed that will give satisfaction to the buyer, and bring the best price. Mr. F. has found, after a good deal of patient experimenting with several mills, and going to a good deal of expense in the matter, that the Nash & Cutts No. 2 machine is the best. rigged out with screens, as follows: Take out the lower cheat screen and substitute in its place the mustard screen, which will take out all small seeds. Take off two upper screens, and in their place put on top square mesh No. 7, which will carry off wheat and oats, and in place of second screen, a Square mesh No. 6. Next replace the whole combination to prevent the flax from blowing over behind the machine. If not very foul a No. 2 machine will clean in good merchantable condition from 100 to 150 sacks of seed per day with two men. For very foul seed, Mr. F. and his intelligent workmen have rigged on an attachment, a supplementary shaker, with two screens, which completely cleans out all oats and other foul seed that runs over in fast work from the short screens above.

RAISING CLEAN SEED

Is important. While the flax is growing men must go into the field and pull out all large weeds, such as mustard, wheat, oats, barley, etc., for instance. If neglected the flax will be shaded in its growth and not fill well. It will not be as rich in oil, besides being foul and difficult to clean. A lazy farmer, one who would rather shake dice in a whisky saloon in town than bend his back on his own farm, is not the fit man for this business. No energetic man will stand back because there is work about it, and it requires care in growing and harvesting.

AS TO THE SOIL.

Mr. F. declares that any good soil that will grow wheat or barley will produce good flax in paying quantities, if kept clean from foul growth, and sown early enough.

AS A ROTATION CROP.

A gentleman in Hollister who one season grew on one half of a field, flax, and on the other wheat, and the next year sowed wheat over the whole field, found that the part covered the year before with flax yielded between three and four sacks to the acre more than the portion previously covered with wheat, doubling the profits. The above facts from Mr. F. we believe should be of value to every grain grower in California. They are the result of practical experience and observation of an intelligent and energetic business man and farmer. One word as to his stock. Mr. F. deals largely in beef stock, buying and selling. Every season he raises several acres of beets, which he converts with other feed into beef, with an immense profit. We have not his figures, but readily accept his assertion. He has also some fine Durham milk and beef stock on his farm, and a lot of horses such as are serviceable. His farming is a mere pastime, as it were, but shows some system and success.

POISONING SQUIRRELS.

Squirrels, which come in from the hills at times like an avalanche, are here poisoned by the host. Sweet apples are cut into eight pieces each and charged with strychnine, by making an incision through the skin and putting the poison into the center, then the pieces are dropped into the holes. Sweet apples are ravenously eaten by the rodents, and this way of fixing them is pronounced a dead shot.

A slothful farmer in such a position might starve, where only energy is required to gain wealth. Mr. F. anticipates making valuable improvements on his farm, which, as we said before, is an excellent locality for an orchard, even of semi-tropical fruits, which we believe would succeed admirably under a sheltering wind screen of Monterey cypress.

Mr. Jack Chamberlain, of Oakland, a gentleman of ability and fine address, will take the field for a tour of the Pacific coast the coming year, as special business representative and correspondent of the CALIFORNIA AGRICULTURIST. Anything that our friends can do to aid him in gaining information and patronage for the CAL. AGRICULTURIST will be gratefully appreciated by the Editor.

PATRONS OF HUSBANDRY.

Lectures.

The Lecturer of the State Grange, Mr. Blakey Pilkington, of Santa Cruz, will commence a series of lectures to the Granges in this State this month. The programme as laid out for December is as follows:

Dec. 12, at Petaluma—Petaluma, Sonoma, Bennett Valley and Santa Rosa Granges.

Dec. 14, at Napa—Napa, St. Helena, Yountville and Vallejo Granges.

Dec. 15th, at Suisun—Suisun and Rockville Granges.

Dec. 16, at Elmira—Elmira, Vacaville, Buckeye, Binghampton and Dixon Granges.

Dec. 18, at Woodland—Yolo, Cache Creek, Fairview Valley, Antelope, Capay Valley and West Grafton Granges.

Dec. 19, at Sacramento—Sacramento, Elk Grove, Florin, Enterprise, Cosumnes, American River and Franklin Granges.

Dec. 21, at Yuba City—Yuba City, North Butte, Marysville and Wheatland Granges.

Dec. 23, at Chico—Chico and Nord Granges.

Two lectures will be given on each date, as above. Granges should turn out handsomely, as the subject matter of these lectures is of great importance to the order, and should be well understood. Mr. Pilkington is an agreeable speaker, well informed, and thoroughly in earnest, and the Patrons of Husbandry have been very fortunate in securing his services.

Special Notice to Delinquents.—The January issue will be the last one sent to such subscribers as neither request a continuance nor pay in advance. Please bear this in mind. We will be willing to wait a while on our friends who cannot pay at once, but we must know who by their orders. Because we shall stop sending the paper to those not ordering is no sign that we shall not hold every delinquent to his account.

We shall have an active agent in the field to canvass the State, write up its most interesting features, and go for delinquents. We only ask our just dues, and in every case this we shall expect and demand.

Horticultural.—We have devoted an unusual amount of room to horticulture this month, because it is the season to plant trees, and must be of more interest to the majority of our readers than any other subject. Next month we will have something on forest and grape culture, with a diversity of deparments.

THE "Intellectual Subsoiler," advertised in this issue, has been in constant use in our office for years. It goes to the root of words and ideas, and turns up definitions and synonyms properly spelled.

THE original poem in this issue is worthy of a nich in the temple of fame.

California AGRICULTURIST AND Live Stock Journal.

PUBLISHED MONTHLY BY THE

CAL. AGRICULTURIST PUB. CO.

S. HARRIS HERRING, Editor.

OFFICE—No. 338 First Street, with Cottle & Wright's Job Printing Office.

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Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

Bound Volumes.—We shall get a number of volumes of the AGRICULTURIST for 1876 complete, saved for the purpose, bound. Several of these will be for sale at the subscription price, added to the simple cost of binding.

Missing Numbers.—We have a few papers of different months, back numbers, that will be supplied to any subscriber wanting them to fill volumes where numbers are missing. You who have saved your AGRICULTURIST for reference will please look them over, and if any numbers are lacking, order at once. We will supply free of cost as long as we have them.

"Aunt Polly" and her young folks have our thanks for the interest they have added to the AGRICULTURIST. Boys and girls make men and women in a very few years and we like to have them try to make good ones. There is no better way than in doing right generally and taking particular interest in such good reading as Aunt Polly and her contributors furnish to our columns. It wont hurt us older folks to read the Boys' and Girls' Department either. We can waste time much less profitably, to say the least.

"Jewell" gives valuable hints this month to mothers about dressing babies. We note one point: That delicate babies are the ones that wrong dressing and neglect kills off. It is a fact well known to breeders of fine stock and poultry that the best breeds have the tenderest young. Will not the same rule apply to human beings? We believe that the laws that govern physical life in one case apply to the other: that the babies which require the best treatment, the tenderest care, to live and thrive, are likely to make the best men and women. The young of the lowest orders of life need little care; the young of the highest orders require much, and the finer the organization the more care and attention to its wants is necessary.

Our Premium Certificates.—Those of our subscribers who have obtained that elegant American Chromo, "Beatrice Cenci," the subject of our last Premium Certificate, will be gratified to learn that our Certificate this month has for a subject a chromo fully up to the last one in merit and value. All we can say is, those of our subscribers who want first class chromos should not lose these opportunities we are now offering. "Beatrice" is a lovely picture, and grows more attractive on acquaintance. This month's "Fruit Piece" is a real work of art. The California Art Publication Company are doing more for us than we really expected, and we are so well satisfied that we gladly pay our share of the expense. We would call your attention to their advertisement in our paper this month, and can add that we feel fully warranted in endorsing them in all they say.

On the Chinese question our opinion is again asked, as though we could settle it we suppose. Well, at any rate, our mind is settled that the Chinese among us are a greater curse than blessing to us. The rich may like to increase their riches, and be waited upon like lords by the Chinese menials But industry and enterprise is not benefitted by their aid. Our working men and women are not encouraged by their presence. Labor is not made more honorable, nor capital less exacting: nor is equality and good will and general prosperity fostered. Aristocratic tastes and tendencies are not on the decrease in communities where Chinese laborers are employed; and odious distinctions between the rich and the poor—the man who labors and the man who lives from others' labor—are not becoming less odious. The rising generation hold in no higher estimation the grand idea that LABOR IS HONORABLE. We believe in universal equality and freedom, and cannot admire a system which treads down the poor, makes labor slave, creates a privileged class, and demoralizes society. This we think the Chinese element amongst us is surely doing all the time, with no compensating benefits. Hence our aversion to it.

A Valuable Volume for Reading and for Reference—The bound numbers of the CALIFORNIA AGRICULTURIST for 1876, with the index issued this month. Look over this index and see what a variety of useful and interesting topics are treated upon. Examine the articles and see how practical and entertaining they are. The AGRICULTURIST is not made up of a jumble of trash, picked up at hap-hazard from other journals. It contains a mass of original matter by writers—earnest, intelligent persons—who write because they have something to say worth putting into print. The editorial articles have been written with an eye to the wants of readers; to utility and sound principles. The selections have been carefully chosen with reference to their value, adaptability to our wants, and general or special interest to readers. They have been gleaned from extensive reading of the best literature upon such subjects as the departments and headings will indicate. There are many able pens in the world devoted to the service of mankind, many able agricultural and household journals, and we have found much more good than we could use, and so have given only the very cream to our readers. All this has required a deal of constant, laborious, yet pleasant attention—much more than any one unacquainted with such work can well imagine.

Manuring the soil is best done in the Fall or early Winter. This is a matter that certainly deserves more attention than most farmers in this State give it. Stable and yard manure is beneficial on any soil, and particularly so on dry uplands and heavy soils If plowed under in a coarse condition, in lumps, it will not help make a crop the first year, but will cause all the earth above it to dry out, or "burn out," as some express it, during the dry season, on dry land not irrigated. In our climate, always apply the manure to the surface. You can plow before you spread on the manure, if you want to, and harrow the manure and soil together. This is a good plan, but do not turn it under until it has lain upon the soil one season. Straw and manure will rot upon the surface, when mixed with surface soil, much quicker than when plowed under. This is on the same principle that a piece of board, or a fence post, lying upon the ground or partially covered with earth, will decay sooner than if buried completely under the soil. You all know how much sooner a fence post rots off at the surface than it will a few inches below the surface Manure and straw upon the surface act as a mulching to save the moisure in the soil from being taken into the air, and while it decays sooner, serves a double purpose, viz; enriching the soil and protecting the moisture of the soil. It is a benefit to stir the manure with the surface soil but an injury to plow it under in any upland soil not irrigated. Where irrigation is practiced, or on low, moist soils, it makes not so much difference whether it be plowed under or not.

Sumac.—Last season Mr. Jabob Eberhardt, tanner, Santa Clara, left a sack of sumac seed with us for distribution. A note in the AGRICULTURIST attracted calls enough to exhaust the supply. We wish each one who got seed to report, whether successful or not. Mr. Eberhardt, who is a very energetic and successful man, and a practical and scientific tanner, wishes to see the sumac cultivated on this coast. He asserts that there is money in it. There are nearly 300 tons of sumac used on this coast by tanners annually, which costs here about $150 per ton. The best sumac is cultivated, and comes from Cicily. The wild sumac gathered in the Eastern States is only worth about two-thirds as much as the cultivated Cicily. At $75 to $80 per ton, sumac could be very profitably cultivated on this coast, and the consumption at this price would be double what it now is at $150 per ton. The finest and softest leather is tanned with sumac. The French calf, for instance, so renowned for boots, can not be prodnced in America in competition at the prices now demanded here for sumac. Sumac is as easily propgrated from roots as blackberries. Once get a good stock of roots, and acres could be planted. It is thought that it can be annually cut with a mower or header machine after once properly rooted in the soil, and that the level chappared lands will produce it abundantly, and that Yankee ingenuity can, with machinery, easily compete with the cheaper labor of Cicily. At any rate, we hope with Mr. Eberhardt, to see it soon tried here on a liberal scale.

Released from Custody.—In the District Court, on Saturday, November 18th, F. E. Spencer, attorney for Mrs. Emily D. Austin in the divorce suit in which O. N. Austin was defendant, made a motion to the effect that the order heretofore made imprisoning the defendant for contempt of court be vacated, and the defendant discharged from custody. the order was accordingly made and Austin was set at liberty. The history of the case is as follows: In the month of August, 1872, the plaintiff, Emily D. Austin, married the defendant. Their married life was not a happy one; and in February, 1873, Mrs. Austin left her husband's roof on account of alleged harsh treatment, and in the following month brought suit for divorce on the ground of extreme cruelty. Austin was then and had been for many years a well-to-do farmer and orchardist, residing near Santa Clara. After several postponements and continuances the cause came up for trial at the January (1874) term of the District Court, resulting in the disagreement of the jury. The next trial took place at the September term of Court in the same year, and a verdict was returned in favor of the plaintiff. Austin had been paying for some time prior to this action, by order of Judge Belden, $30 per month alimony. After the verdict had been rendered the Court ordred him to pay to the plaintiff the further sum of $938, for expenses incurre in the suit, etc. He refused to comply and the Court Commissioner was instructed to raise the money by mortgaging the homestead, as the defendant had nothing "in sight" that could be attached. The banks refused to loan the money without Austin's signature, and the commissioner so reported Judge Belden then ordered the obstinate Austin to make a promissary note and mortgage and raise the money, and defendant still persisting in his stubbornness, was committed to jail for his contempt of Court in refusing to obey the mandate of the Court. He entered the jail on the 5th of February, 1875, and up the time of his release never relaxed in the slightest degree from his obstinacy. He affirmed that he would stay in durance vile to the end of his days rather than pay the money, and there is no doubt but he would have kept his word. He was in jail 652 days.

The above statement of the case in the San Jose "Mercury" is put in a light most favorable to the prosecutors, the arbitrary Judge Belden and rapacious lawyer Spencer, who have kept Mr. Austin in prison to the damage of his business, health, body and mind, for long, weary months, because he would not consent to submit to an unjust and outrageous robbery by said "Court," in the name of "justice!"

We hope to live to see a change, and reform in this whole lawyer, judge and court business, so that it will be impossible for any combination of judges and lawyers to thus outrage and imprison an honest American citizen under any such pretense, or to hold him in any such manner. It is a power that no court should be allowed to exercise.

How at last was the "obstinate" Mr. Austin released? Was "justice" satisfied? Not a bit of it. It was by a simple turn of the wrist. Think of being at the tender mercies of such an opposing attorney, hankering for a big fee, and of such a court. Whose turn is to come next? This is a question that may well arouse any citizen. Contempt of Court, forsooth! What decent citizen can have anything but supreme contempt for any and all such Courts, judges, lawyers and all?

This matter should arrest the attention of every citizen, and should not be allowed to drop until the matter is thoroughly ventilated and understood, and such changes are made in court laws as shall in future prevent any such outrages from being even possible.

Mr. Austin is entitled to the honor and sympathy of every well-meaning citizen for his persistent adhering to his principles of right.

Poetry.

The Better for the Doing.

BY ISAAC KINLEY.

THROUGH the dim twilight of the ages,
From cycles long ago of time,
Still come the voices of the sages;
And written on historic pages
Are names of men of deed sublime.

The world doth joy, the world doth glory,
In its great names of long ago—
The demigods of ancient story
Who waked mankind from sin and wo,
Whose lives it is our bliss to know.

Arouse thee! O, my laggard spirit!
Let deeds of greatness then be thine,
And bless the world that shall inherit
Thy name, thy fame, thy great design
Of deed, or word, or living line.

If on thy name would be no blackness,
No spot of foulness mar thy fame—
Then in thy will must be no slackness;
Thy soul must be a living flame,
Undimmed by sight of sin or shame.

Think'st thou there is no living Hydra?
No monster in thy path to-day?
Ah! cleanse thou yon Augean stable,
And yon Procrustean tyrant slay—
Where all must walk, make clear the way.

WHAT IS THE REASON, dost thou ask me,
O, laggard spirit of my life!
Why to thy utmost strength I task thee?
Why struggle in scenes of strife?

I answer that thou art a human,
With soul to dare and hand to do;
And if thou wouldst but be a true man,
Must labor on thy journey through.

Thou mightst beneath the weeping willow,
On flowery beds of ease recline,
Or idly dream upon thy pillow
What blissful hours in life are thine.

Thou mightst, I grant, with little labor,
Contrive to know what others know:
As wise become as is thy neighbor,
And do, perchance, as others do.

Hath love for man or hope of heaven,
My leggard spirit e'er inspired?
Know, then, for every talent given,
That ten will be of thee required.

It is the law of human growing—
Each sturdy stroke gives strength to strike;
And this great truth is worth thy knowing—
It reaches all mankind alike.

It is a truth to all extending,
Alike to all organic things,
To him who is his power expending,
The power expended, power brings.

'Tis work, that strength the toiler gives:
For all he does he gains the more;
And struggling on each day he lives,
Is better for the day before.

From day to day his strength grows stronger,
Grows stronger for the work that's done;
And life, itself, protracted longer,
Is youthful to its setting sun.

The sailor on the wide, wild ocean,
Learns boldness when the storm-winds roar;
The soldier, used to war's commotion,
Knows naught of fear when battles lower.

And he who watches the careering
Of planets through the far, blue sky,
But sees the farther for this peering
Of his heaven-searching eye.

And so it is—the power of thinking,
Of tracing reason's endless chain—
The mind is quickened by this linking
Of fact to fact in endless train.

"Tis ever gaining in acuteness,
The mental sight doth clearer grow;
And with more logical astuteness,
Effect and cause more plainly show.

E'en so it is—the power of loving
Is stronger for the love we bear,
And every deed of heartfelt kindness
But lifts us where the angels are.

Then, if each deed that's worth the doing,
To WELL no be the golden rule,
In the vocation we're pursuing
We'll find life's labor is our school.

And praising God for work that's given,
From morning dawn to set of sun,
Grow stronger for that we have striven,
And better for the work that's done.

Each gentle thought, each noble feeling,
Doth ever make the soul more pure;
And each day's toil the truth 'a revealing
That God doth bless the noble doer.

Then hail my brother! hail my sister!
Toiling on life's rugged way;
For ye shall reap in the hereafter,
Rich blessings for the toils to-day.

SAN JOSE, November, 1876.

Welcome to the Nations.

BY OLIVER WENDELL HOLMES.

I.

Bright on the banners of lily and rose,
Lo, the last sun of our century sets!
Wreathe the black cannon that scowled on our foes,
All but her friendships the Nation forgets!
All but her friends and their welcome forgots!
These are around her: But where are her foes?
Lo, while the sun of her century sets,
Peace with her garlands of lily and rose.

II.

Welcome! a shout like the war trumpet swell
Wakes the wild echoes that slumber around!
Welcome! it quivers from Liberty's bell;
Welcome! the walls of her temple resound!
Hark! the gray walls of her temple resound!
Fade the far voices or hill-side and dell;
Welcome! still whisper the echoes around!
Welcome! still trembles on Liberty's bell!

III.

Thrones of the Continents! Isles of the Sea!
Yours are the garlands of peace we entwine;
Welcome once more to the land of the free,
Shadowed alike by the palm and the pine;
Softly they murmur, the palm and the pine:
"Hushed is our strife in the land of the free."
Over your children their branches entwine,
Thrones of the Continents! Isles of the Sea!

The Storm.

Up from mirk midnight to the dawn,
Waking, I heard the wild wind-rout,
With sobbing wail and gusty shout,
Sweep through the elms that skirt the lawn.

Those patriarchs of their race, whose leaves
Scarce murmured as the zephyrs passed,
Now groaned in concert with the blast,
And with their branches smote the eaves.

Dim broke the morn along the crags
That eastward loom above the sea,
And long processions sailed a-lee
Of vapory forms, like weird bags.

Now in one sheeted flood it rains;
But the slant wind, with headlong force,
Caught in its impetuous course,
And dashed it on the trembling panes.

Anon the sun looked through the rift,
But pallid as his sister moon
When glows on high night's sober noon,
Chasing through heaven the flying drift.

At length, uprising toward his height,
Majestic moves the orb of day,
And subject nature owns his sway,
And the spent storm attests his might.

Gone the long night's tempestuous dream,
And mountain vale and forest aisle
And earth's broad fields serenely smile,
Subdued by that all-cheering beam.

And all is still, save from afar
That one low murmur overmore,
Where the long roll bests on the shore,
And wind and wave wage war on war.

—[George Lunt, in Harper's.

A Pacific December.

O, Autumn, with thy dying smell,
So faint, so sad, and yet so sweet;
Amid the strewings at my feet,
By pattering nut and broken shell,
I feel the secret of the spell,
The dying year's in full retreat—
Forever.

Reburnished by the last week's rains
The fields recall the green of spring;
The hills decree a sharper ring;
The dews in diamonds drench the plains;
The leaves grow thinner in the lanes;
The threade upon the hedgerows cling—
In silver.

Pale, like the fading forest hair,
The slanting sunbeams straggle through;
The sky is of a fearful blue;
A pensive earnest fills the air;
And, with pathetic sweetness fair,
The wan world seems to wave adieu
Forever.

The cattle browse along the lea;
The piping robin haunts the lanes;
The yellow turning woodland "wanes."
The apple tumbles from the tree;
And Autumn, ranging through, links me
To Nature.

O pensive and poetic year,
What is the secret of thy power
Whereby my posey would flower
Between a radiance and a tear?
And yet I find no longing here
To paint what trembles to the hour
Within me!

O Eden world of hill and green,
And distant gleams of slumbering blue!
I find no lyric language true
To paint the shadowed and the seen;
O infinitely touching view,
In vain thy spirit peeps between!
The sublimities that lie in you
Evade me.

The Old Friends.

BY SARAH DOUDNEY.

Where are they scattered now,
The old, old friends?
One made her dwelling where the maples glow,
And mighty streams through solemn forests flow;
But never, from that pine-crowned land of snow,
A message sends.

Some meet me oft amid
Life's common ways;
And then, perchance, a word or smile declares
That warm hearts throb between their load of cares:
For love grows on, like wheat among the tares,
Till harvest days.

"But some are fall'n asleep;"
The words are sweet!
O, friends at rest beneath the blessed sod,
My feet still tread the rugged road ye trod
Ere yet your loving souls went back to God!
When shall we meet?

O, thou divinest Friend,
When shall it be
That I may know thee in their garments white?
And see them with a new and clearer sight,
Mine old familiar friends—made fair and bright,
Like unto thee!

Nil Desperandum.

"There is many a rest in the road of life,
If we only would stop to take it;
And many a tone in better land,
If the querulous heart would wake it.
To the sunny soul that is full of hope,
And whose beautiful trust ne'er faileth,
The grass is green, and the flowers are bright,
Though the wintry storm prevaileth.

Better to hope, though the clouds hang low,
And to keep the eyes still lifted;
For the sweet blue sky will soon peep through,
When the ominous clouds are rifted.
There was never a night without a day,
Nor an evening but a morning;
And the darkest hour, so the proverb goes,
Is the hour before the dawning.

There is many a gem in the path of life,
Which we pass in our idle pleasure,
That is richer far than the jeweled crown,
Or the miser's hoarded treasure.
It may be the love of a little child,
Or a mother's prayer to heaven;
Or, only a beggar's grateful thanks,
For a cup of water given.

Better to weave in the web of life,
A bright and a beautiful filling,
And do God's will with a steady mind,
And hands that are swift and willing,
Than to snap the delicate silver threads,
Of our curious lives asunder,
And then, heaven blame for the tangled ends,
And sit to grieve and wonder."

A Hundred Years to Come.

BY WM. O. BROWN.

Oh! where will be the birds that sing
A hundred years to come;
The flowers that now in beauty spring
A hundred years to come;
The rosy lip,
The lofty brow,
The heart that beats
So gayly now?
Oh! where will be love's beaming eye,
Joy's pleasant smile and sorrow's sigh,
A hundred years to come?

Who'll press for gold this crowded street
A hundred years to come?
Who'll tread yon church with willing feet
A hundred years to come?
Pale, trembling age,
And fiery youth,
And childhood with
Its brow of truth,
The rich and poor, on land and sea,—
Where will the mighty millions be
A hundred years to come?

We all within our graves shall sleep
A hundred years to come;
No living soul for us will weep
A hundred years to come.
But other men
Our lands shall till,
And others then
Our streets will fill;
While other birds will sing as gay,
As bright the sunshine as to-day,
A hundred years to come.

Rest at Last.

After the shower, the tranquil sun;
Silver stars when the day is done.
After the snow, the emerald leaves;
After the harvest, golden sheaves.
After the clouds, the violet sky;
Quiet woods when the wind goes by.
After the tempest, the lull of waves;
After the battle, peaceful graves.
After the knell, the wedding bells;
Joyful greetings from sad farewells.
After the bud, the radiant rose;
After our hoping, sweet repose.
After the burden, the blissful meet;
After the furrow, the waking seed.
After the flight, the downy nest;
Over the shadowy river—rest.

I'm Growing Old.

BY JOHN G. SAXE.

My days pass pleasantly away,
My nights are blessed with sweetest sleep,
I feel no symptoms of decay,
I have no cause to mourn or weep,
My foes are impotent and shy,
My friends are neither false nor cold,
And yet of late I often sigh,
I'm growing old!

My growing talk of olden times,
My growing thirst for early news,
My growing apathy for rhymes,
My growing love for easy shoes,
My growing hate of crowds and noise,
My growing fear of catching cold,
All tell me in the plainest voice—
I'm growing old!

I'm growing fonder of my staff,
I'm growing dimmer in the eye,
I'm growing fainter in my laugh,
I'm growing deeper in my sigh;
I'm growing careless in my dress,
I'm growing frugal of my gold,
I'm growing wise, I'm growing—yes—
I'm growing old!

I feel it in my changing taste,
I see it in my changing air,
I see it in my growing waist,
I see it in my snowy hair,
A thousand hints proclaim the truth,
As plain as truth was ever told,
That even in my vaunted youth
I'm growing old!

Ah me! my very laurels breathe
The tale in my reluctant ears;
And every boon the hours bequeath,
But makes me debtor to the years.
E'en Flattery's honeyed words declare
The secret she would fain withhold,
And tells me in "How young you are!"
"I'm growing old!"

Thanks to the years whose rapid flight
My sombre muse too sadly sings!
Thanks for the gleams of golden light
That tint the darkness of their wings—
The light that beams from out the sky
Those heavenly mansions to unfold,
Where all are blest, and none may sigh,
"I'm growing old!"

DEEP PLOWING.

Experience is said to be the mother of philosophy, and certainly it does teach a great many things, and ought to teach more than it does. I do not mean that mother Experience is at all to blame for any failure to teach. We ourselves sometimes fail to learn from the facts she gives us, as well as sometimes rashly jump to conclusions which the facts of our dear mother do in no way warrant.

But if experience is so valuable, as I concede it to be, you, Mr. Editor, will probably consider it a piece of impertinence to weigh my inexperience against John Smith's, or John Jones's, or John of any other of the numerous families of Adam's experience. But then, is not reason of some account? If a man should measure and then declare from experience that a straight line is not the shortest distance between two points, my reason might possibly rebel, even though I knew nothing from actual measurement.

Deep plowing is, to my mind, something like an axiom. There may be exceptional cases, as where the surface soil is underlaid by sand, but the rule is certainly in favor of deep culture. On lands liable to drouth, the reason for deep culture is strongly re-enforced. What is the Editor's opinion?

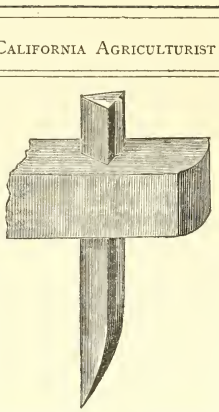
AMATEUR.

[It has taken Amateur some time to get to his subject, and one or two simple assertions is all that his argument consists of. This is not the kind of reasoning needed to convey information or show the "reason why." Experience has in many cases taught directly opposite to the assertions of Amateur. Thorough surface tillage, in a dry climate, has in many cases proved the best on soils subject to drouth. The reason why is plain. The surface tillage, by making a soft mulching of earth on the surface, prevents evaporation of moisture from the soil lying under this mulching. Deep plowing adds no more moisture than shallow plowing does to the soil. The main and desirable thing is to retain the moisture already in the soil, for the use of plants—not allow it to escape in the air.

Some claim that if the soil is deeply plowed before the rains, it will hold more water. The difference will not amount to much at any rate, for the earth will settle together if left light. In its natural condition, the subsoil is usually lighter than after plowing, because the roots of plants decaying leave it full of pores. Also insects fill it with holes. After a deep plowing it may sodden together and be more solid than ever, particularly in clay soils. Thorough surface cultivation is best for drought, and every good reason will show what experience on this coast has abundantly proven.

"Beatrice."—Such of our subscribers as have not seen "Beatrice," may think fifty cents too much money for the picture. The fact is, fifty cents is just no money at all for the chromo. We have seen it sell in San Jose at auction—several copies—in frames not worth five dollars, for $15 each, quick sale. It is a magnificent chromo, after one of the very best paintings in existence. We are glad for this opportunity of putting it into the hands of our subscribers, and no one who gets it can ever regret the trifle required to procure it.

The fruit piece offered this month is equal in merit—a really elegant affair.



THE FON DU LAC, (WIS.,) HARROW.

The cut herewith given is of a harrow tooth of peculiar construction, such as belongs to the Fon du Lac harrow, which the Farmer's Union are introducing on this coast. Mr. G. V. D. Brand, lately from Wisconsin furnishes us with the cut. We have examined the harrow and think it altogether the best one out. The tooth is of cast-steel, three cornered, with a spine on the back to give strength and hold it firmly in place. The end is brought to a fine point, as shown in the engraving. Farmers have but to see the harrow and tooth to at once adopt it as just the thing to do thorough work on any kind of soil.

Family Vegetable Garden.—Farmers generally seem to be impressed with the idea that they cannot grow vegetables for their own use on upland soils, such as are used for grain. Now we assert that it can be done, and profitably done, too. Our own experience in this State twenty years ago proved it, and we have not been asleep to the subject since We know that it can be done, and will tell you how you can have a vegetable garden at your own door.

In the first place plow your ground and cultivate it, not deep but thoroughly. If it is naturally crumbly, all the better; but if not, pulverize the clods with a maul. One acre, or even half an acre, will do for you to experiment on, if you are skeptical. Now haul upon this piece of ground a large quantity of manure. Don't plow it under, but spread it thickly over the surface, the thicker the better. It ought to be thick enough to make a good mulching. Let it lie upon the ground a couple of weeks, then harrow again to kill weeds. You may harrow the surface again after manuring, but unless you can irrigate do not plow the manure under. Now lay off the rows with a line that will reach the length of the patch, marking with the hoe a shallow trench. Plant beets, carrots, onions, peas, turnips, radishes and lettuce, any time in the month or January. Start cabbage and cauliflower plants in a manure bed made of three-fourths manure and one-fourth earth thoroughly mixed, in a place where you can shelter the plants from frosts. When large enough transplant (in January or February). You can plant mangel-wurzel beets for stock, also white Belgian carrots, in large quantities if you please. They will get a pretty fair growth before dry, hot weather, and will stand in the ground all Summer if you want to leave them till Fall, and then grow again when rains come. In planting seed, press them down, cover lightly and press firmly After they come up hoe out the weeds, and the vegetables will grow to surprise you. You can plant potatoes in furrows, covering thickly with coarse manure and straw, any time now for an early crop; also again in February for a later crop. By middle of April and first of May you can plant squashes, tomatoes, cucumbers, melons, beans, etc. But remember they must be put upon ground kept clear of weeds and other plants (unless you irrigate), or they will not find the requisite moisture to complete a growth. It will be an advantage, where sand can be obtained, to mix sand with the surface soil in both vegetable and flower garden. This is generally easy of access to most farms, in some creek bed or old drift.

Try the "experiment," brother farmer, this once. Pulverize the soil, pile on the manure, put in the seeds, and you will never again be without a home garden.

Honey.—E. H. Lewis, of Gilroy, who has been on a visit East, says that some ten car loads of southern California honey arrived at New York while he was there, and the best sold at 15 to 16 cents per pound wholesale. Probably the cost from San Francisco to New York was $50 per ton, or 2½ cents per pound. Allow ½ per cent from Los Angeles to San Francisco, and an average of 12 cents per pound will probably come at the actual value at shipping point. Here in San Jose we have to pay 25 cents for San Diego honey at retail.

The Close of the present volume and the approach of a new year, is an event in the life of the CALIFORNIA AGRICULTURIST. Never has it been on so popular and permanent a footing. Its friends are multiplied, and friendships strengthened; its field is extended, and its work grown more and more into favor and usefulness. We acknowledge the many kindly words with thankfulness, and the material aid with feelings of gratification and gratitude. The past has not been without its trials as well as pleasures. The future gleams brightly, and hope will only inspire to greater efforts and expectations. We determine that the coming volume shall be everything that a labor of constant application and love can make it.

CO-OPERATIVE SELLING.

It has been well said that more money is to be made by farmers by co-operative selling than from co-operative buying. Thus far, however, more attention has been given to co-operative buying than to co-operative selling. The bee-keepers of San Diego county have formed an association for co-operative selling. They propose to ship all their honey through this association, which will examine, grade and put up the honey, the honey cases will all bear the brand of the association, and they propose to gain a standard reputation through fair dealing. Our wheat growers could associate through the grange, or some other medium, and be the gainers. The wheat could be all subject to examination and grading as to quality and cleanliness, and proportioned in price according to merit. The shipping could be done through such agents as may be elected each year from out the members of the association for that purpose. The farmers themselves could furnish all the necessary capital, and be independent of every designing person or corporation. On the same principle our fruit growers can associate together to ship fresh fruits East; only in this case, where fruits are put up by each person without inspection, the individual brand of the growers is necessary, and accounts of value according to quality would be subject to gradation after sales. The whole scope of eastern markets could be reached and supplied through such co-operative efforts. This is a subject worthy of attention, and we are glad to see that our producers are very generally thinking upon it.

ENQUIRIES.

ED. AGRICULTURIST:—Will you please inform me where I can get some Black Poland hens, full blood, and the price of the same? And oblige,

Yours, A. FRENCH,
Salinas City.

Who can answer?

EDITOR AGRICULTURIST: *Dear Sir*—If you know any party having the "Poland China" breed of swine, pure breed, please to give me the P. O. address.

J. RATHGEB, Sr., San Andreo.

Who can answer?

A subscriber asks: "Who on this Coast is buying mohair, and what is first class mohair worth?" Ans.—No one at present. Thos. Bailey & Co, near the S. P. R. R. depot, San Francisco, are receiving and shipping to New York. They sold Stockton & Buffum's fleece last season with satisfactory results. First class mohair ranges from 60 to 90 cents, so we are informed by Angora goat breeders.

ILLEGAL VOTING.

A Remedy Proposed.

Says the *Nevada Transcript:* It is a lamentable fact that there are American citizens who so lightly regard the duties of citizenship, that they will vote early and often, and if it is necessary to commit fraud to do it, they even then do not hesitate. No good citizen desires to have such practices continued, even if his own political party gains thereby. The Marysville *Appeal* resents a remedy which we think will just fit the case and put a stop to the evil. It says: "The next Constitutional Amendment necessary to save our republic, if it is saveable, is one forever disfranchising any man who in any way corrupts the ballot box, either by voting illegally, inducing any other person to do so, or buying a vote. In the case of buying and selling, both should be forever disfranchised. Such an amendment would check the villian whose work is making honest men sick of universal suffrage.

MIND, MATTER, MONEY, BEAUTY.—Webster's Quarto Dictionary, as now published, has cost more intellectual labor, more money in its "getting up," and contains more matter, and a larger number of beautiful engravings, (3000 or more, with four pages of colored plates,) than any single volume ever before published for popular use in this or any other country. It is largely the standard in England as well as in this country. Bell & Daldy, the publishers of Bohn's libraries, are the London publishers of this magnificent volume.

Horticulture.

HOW TO PLANT AN ORCHARD.

The Best Varieties of Fruits for a Family Orchard.

Also Some Hints as to the Care and Culture of Orchards, etc.

GOOD FRUITS A BLESSING.

ANOTHER season, promising to be favorable for orchard planting and the growth of transplanted trees, is upon us, encouraging every person who has a place to plant trees to cultivate an orchard. To advise persons who have not already all the orchard that they need, to plant trees, seems, in this age of intelligence, as superfluous. Still we know that not every one has realized the enjoyment that it gives, or is aware of the importance of a home orchard, and the value of a supply of fruits for family use. A few years back, and orchards were the exception; few persons appeciated the value of fruits for food. As the world progresses few are now to be found who would be wholly without it. No class of food has a greater dietic value than good fruits. Persons who, with other sorts of food in abundance, habitually eat largely of fruits, are seldom or never sick. There is no better regulator of stomach and bowels. Fruit of some kind should always be put upon the table, and in such quantity as to satisfy the appetites of every person. It is as nutritious, and should be as plenty and as cheap as any other food. Once habituated to it, and partaking of it regularly, no pills or other physic will ever be necessary. No indigestible pickles will be wanted, no unnatural craving for vinegar will torment the stomach. This we can say from our own experience, and that of our family. Deprive us of our regular fruit at the table, and we should soon get sick and need physic. With it digestion need never be disarranged. The best authorities teem with evidences of the value of fruit as human food. Of course we are in favor of orchards and fruits for every family and advise their culture.

OUR ANNUAL ADVICE.

Again we venture to give the best obtainable advice from practical orchardists as to the best varieties of fruit trees to plant for a home orchard, and for profit.

We find it necessary to repeat the most important parts of previous articles; in fact, we simply revise our former ones, making such corrections, additions and alterations as the experience of our best orchardists have developed. There may be some good varieties of fruit that we have not included in our list, but certainly we aim to give none but what are first-rate and well adapted to the conditions of soil and the peculiar climate of California. We do not give selections from guess work, nor in the interest of any party, but have taken the most careful pains to be as correct and reliable as possible for the general good of our readers.

THE FAMILY ORCHARD.

For a family orchard, more varieties than for a market orchard should be selected. A succession of ripening should be chosen, from early to late. A few early varieties are enough, as what are not at once consumed will decay. More trees of late sorts should be chosen, for the keeping qualities of late ripening fruits will extend the time for consumption. The best fruits for canning are neither the very earliest nor the latest varieties; and as putting up fruits hermetically has come to be an important consideration, in addition to drying fruits, more trees of a medium ripening kind are required for a complete family orchard than formerly.

FRUITS ADAPTED TO LOCALITIES.

For a market orchard but few varieties are profitable to cultivate, and they should be grown with a view of commanding the highest prices; consequently they should be only of the handsomest sorts, and such as will ripen or be ready for market at the season when there is the best demand for them. The locality and effect of climatic conditions must be considered in the matter of selecting fruits for market, and also for a home orchard. For instance, at Marysville, Sacramento, and other heated portions of our great valleys, as also in the lower foot-hills of the Sierras, the very earliest apples, pears, apricots, peaches, cherries and grapes, will bring the best prices in San Francisco, because in these localities growers can produce fruits several weeks ahead of many other portions of the State. At San Jose, and within the influence of the sea climate, such apples as the Alexander, Maiden's Blush, etc.—Fall apples—are as profitable as any that can be grown. We can get them into market after the run of early apples is over and before the Oregon Winter apples flood the market. Winter apples are also profitable to cultivate in San Jose, and in all cool portions of the State, and particularly along the coast, and also high up in the mountain regions. In Nevada they can grow very excellent winter apples. But owing to the nearness to the sea and the cool climate, San Jose is six weeks behind Marysville in ripening early apples. While the early apples that grow at Marysville are very fine, the Fall and Winter fruits grown there are comparatively inferior. At San Jose superior apples can be produced of any variety. Near the bay, currants, gooseberries, strawberries, etc., of superior quality are produced. These fruits need a moist, cool atmosphere to grow the finest. They will also do fairly in cool mountain regions, while in the hotter interior valleys few or none are grown, as they will not do so well. So great is the influence of climate on fruits that it is a matter of much importance, in connection with the demands and supply of markets, for orchardists to fully understand the nature of plants and effect of climatic conditions on fruit, growth and production.

There are special varieties best suited to dry localities. For instance where the Rambo and Wine Sap varieties of apples will dry up so as to be worthless, the Skinner's Seedling and Gravestein will do very well. The Newton Pippin will make a better apple on dry soils than the White Winter Pearmain, but the former falls off badly, while the latter hangs on in such localities.

BEST PLACE FOR AN ORCHARD.

The home orchard should be laid out with an eye to beautifying the place as well as furnishing fruit for the family. Let the orchard be a background to the residence, so as to give the home a look of completeness. It should not block a fine desirable view from the house, nor be set where it will hide the house from the best view of the highway. Let it be laid out in conformity to some matured plan and to the surroundings to the best advantage, and where it will be handy to the house.

SHELTERING THE ORCHARD.

Where there is not a natural shelter for an orchard one should be provided by planting trees—evergreens are best—on the two sides from whence blow prevailing winds. Acacia, pepper trees, and Monterey cypress are perhaps the best to plant in hedge form for shelter. It will certainly pay to provide some breakwind, and even willows are better than nothing. This matter of providing a shelter is of much importance in many sections of the country, and our readers cannot be too strongly impressed with the idea. If an orchard is laid out so as to cover more ground than the fruit trees will occupy, clumps of evergreens can be set out at intervals through as well as around it, and will more perfectly shelter the orchard, and make it like a laid out park, ornamental as well as useful. This idea might be carried out on most farms with much advantage.

PREPARING THE SOIL.

In preparing the soil for an orchard we believe it best to plow deep, narrow furrows, and cross-plow. The reason for cross-plowing is this: After first deep plowing the surface soil is underneath. It should be left where it belongs, on top. The cross-plowing brings up the most of it, and pulverizes the whole together. Harrow with long teeth weighted harrows, so as to thoroughly pulverize the soil. At any rate, let the pulverization of the soil be perfect, whether you plow deep or shallow.

AFTER CARE OF THE SOIL.

As to the after care and treatment, keep the surface of the soil throughout the orchard loose and light, and free from weeds, all through the season, and especially during Spring and Summer. Never sow grain or grass in the orchard, no matter who advises it. If the land is naturally moist, or can be irrigated, vegetables may be planted and kept cultivated between the rows; but on dry soil, let the trees have all the advantage of clean, well pulverized soil, so that they can resist the drouth of Summer and grow rapidly. An orchard stunted while young can never fully recover. A bearing orchard should be liberally manured, always upon the surface. No matter how coarse the manure—it will answer as a mulching until it decays. Never plow a bearing orchard deeply. A shallow plowing may do to turn under a growth of weeds, but it is better to not allow the weeds to grow. Cultivate it thoroughly and work the surface often enough to destroy all weeds.

LAYING OUT FOR AN ORCHARD.

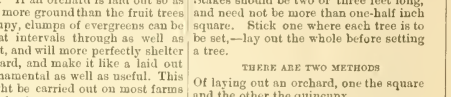
Lay out your grounds so as to set all trees (if for a family orchard) at uniform distances, to facilitate cultivation. Some trees will bear to be closer than others, but for a home orchard calculate to have all trees between 15 and 20 feet apart. On rich, moist soil, and in a sheltered place, the trees should be set further than on poorer soil in an exposed situation. The experience of our orchardists causes them to generally agree in the practice of closer planting than is advised by eastern fruit-growers. We think 16 feet far enough for any fruit trees. The training should accommodate them to that space, and the fruit will be all the better for it.

To make true lines and set trees in perfect line, is much neater than careless planting. As an aid to this, a long wire with marks made by twisting on sticks securely at regular distances we have found to be an excellent line for staking off an orchard—a twine will stretch too much. Find a base-line for one side of the orchard, then get a true right angle at one end, cornering on the first line. Stake off these lines at the right distance for the trees; then, by setting the wire by the stakes of either side and run ing parallel lines, sticking the stakes at each mark on the wire, the rows will come perfectly in line without any squinting or laborious sighting with the eyes.

Usually there is not care enough taken in laying off the ground and staking. It is looked upon as lost time. This is a mistake. A day or two spent in staking off is well-spent time. You will find it out to your sorrow if you do not work deliberately at this part of your job. Stakes should be two or three feet long, and need not be more than one-half inch square. Stick one where each tree is to be set,—lay out the whole before setting a tree.

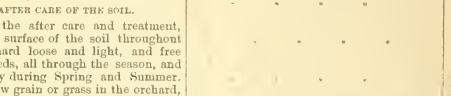
THERE ARE TWO METHODS

Of laying out an orchard, one the square and the other the quincunx.



THE SQUARE

is by drawing straight lines across each other at equal distances, like a checkerboard, and planting the trees where the lines cross each other.



THE QUINCUNX

Is formed by planting one row on the cross lines and the next between the cross lines. But in order to get the trees equidistant a little figuring must be done. For instance, if you want your trees just 16 feet apart, lay off your rows 13 feet 10 and 6-15ths inches asunder, and plant your first row of trees 16 feet from each other. The first tree of your second row plant 8 feet from your starting line, and then go on 16 feet apart as in the first row. Begin and plant your third row as you did your first, and the fourth as you did the second, and so on, breaking joints, as it were, in each row. This will give you a true quincunx, 16 feet apart in every direction.

For trees 20 feet apart, lay off the rows 17 feet 4 inches and plant the trees 20 feet apart in the rows as before explained.

The quincunx makes a beautiful orchard and is a very good arrangement, for it enables one to fill up his ground neatly and profitably, and does away with the necessity of his cultivating a single foot of unoccupied space.

DIGGING HOLES AND PLANTING TREES.

Some object to the word *hole* as applied to tree planting, but we regard it as a good word, although a badly dug hole is an abomination. There seems to be some difference of opinion among good orchardists as to how trees should be planted. All seem agreed that in loose soil large holes are not needed. Make the holes only large and deep enough to take the roots at the natural depth without cramping. Let the hole be a little the deepest at the edges and highest in the centre, so that the roots will incline a little down as the tree rests upon the bottom, or bed. Dr. Strentzel, of Martinez, says that large holes in heavy clay soil are indispensable. In this case make the bed under the trees with surface soil well pulverized. In all cases be sure that each root is laid in a natural position, and that

nothing but clean earth is placed in contact with the roots, as manure or trash of any kind induces a mold or fungus growth that is poisonous to the tree. What we said last year as to the matter of planting trees we repeat. There are a great many hobbies that are passing current as coin in orchard matters that should be exploded, which are yearly repeated by nurserymen and newspapers about digging immense holes and putting trash under trees, etc. Don't put manure or other trash under your trees when you plant them. Put no manure or rubbish into the holes about the roots. You can put in lighter, sandier soil, when planting trees on clay land, to good advantage. Plant the tree at about the same depth as it grew, in *clean* soil, laying the roots in a natural position pointing a little downward. You may put all the manure on the surface, after the tree is planted, that you please, but remember, never put manure next to the roots for fear of rotting them, nor under the tree in our dry climate, as without irrigation it would dry them up.

A TREE-PLANTER.

Usually it takes two men to plant out trees; one to hold the trees in position and one to fill in the soil. It is also found to be difficult to set the tree in the hole exactly where the stake stood before the hole was dug, and the orchard is set out of line in spite of all care. A simple implement can be made in a few minutes that will make true work—a triange made of strips of board three or four feet long, solidly fastened at the corners. Place one corner of the triangle at the foot of the stake, and, as it lays on the ground, stick wooden pins at the two other corners. Remove the stake and triangle, and after you dig the hole you will find that you can replace the stake exactly in true line by laying the two corners of the triangle at their respective pins, as at first. A triangle with solid pins a foot long at two corners to hold it fast to the ground, and a clasp or strap to hold the tree in positson at the third corner, can be set in position to the stake and the tree be held while it is planted. In this way the trees can always be planted exactly in row, and with much less labor.

Tread the soil firmly about the tree, so that the winds shall not shake it loose in the soil, particularly where the soil is light. In dry soil a good watering when planted is good, particularly when the trees are planted late in the season. We advise early planting by all means, when it can be well done. Planting late is better than not to plant at all.

HANDLING AND SELECTION OF TREES.

Selecting the trees is a matter of very much importance. Let every tree be of healthy growth and of symmetrical form. Stunted trees, or such as look bad in the nursery, are seldom worth having at any price. Right here we will say that to select fine trees, it is necessary to purchase trees early in the season, before the nurseries have been culled over and over again by other purchasers. Even if one does not wish to set the trees out early, it is always best to purchase early, and then heel the trees in on your own place. Nurserymen always find it to their advantage to take the tree up early and heel them in, for their own convenience of making sale. It is the best plan—does not injure the trees in the least if well done.

To heel in the trees, dig a trench 9 inches deep and 30 inches wide, stand the trees upright in this trench, as close as convenient without crowding the roots too much, and fill in the clean earth among them, shaking them and covering the roots thoroughly, so that no air spaces are left among the roots.

Do not expose the roots to the wind, sun, or drying air any longer than you can help. Careless handling, bruising and exposure is very injurious. Good, healthy, clean roots, not torn to pieces by digging up, will insure a fine healthy growth, under other favorable conditions.

PRUNING TOPS AND ROOTS.

Before a tree is planted in orchard the ends of the roots, if ragged or bruised, should be smoothly cut off with a sharp knife, that the healing may be rapid and sound. It is advised to delay the trimming of the tops of newly transplanted trees until the buds swell in the spring. Then cut back much or little as you choose, being governed by the form of the tree, and looking to the production of a fine, well formed head. Limbs that run nearly horizontally from the trunk are not liable to split off or break down, but all limbs that are growing crotched with the trunk should be removed, or they will some day split down under a load of fruit, to the great injury of the tree. It is best to remove all of the upright shoots and limbs that can be easily split down, while the tree is young, and only strongly jointed horizontal limbs should be encouraged to grow. A single upright leading stalk or stem is enough for a well formed tree. Encourage the growth of *low* spreading limbs but do not allow them to get too long, so as to bend around sideways or obstruct the use of the cultivator. The side limbs the hight that a man can reach will give the main spread to a tree to good advantage.

ENEMIES OF A YOUNG ORCHARD.

The two worst are gophers and borers. It is little use to plant trees in ground badly infested with gophers until the rodents are exterminated. And as long as they are tolerated in an orchard, there can never be success in growing trees or producing fruits. They naturally increase wherever they once get a footing in garden or orchard. Incessant war must be waged against them, with cats, shooting, trapping and poisoning. Trapping and poisoning are the sure eradicators.

The best natural preventative against borers is to shade the stem of the trees. This can best be done by winding strips of cloth about the trunk, from the ground up to the limbs. Be sure to cover the base of the tree, as the borers are most likely to attack the tree closs to the ground. Another good way is to put two clapboards on the south and west sides. Set them firmly in the ground; they will shade the trunk for years, and prevent borers as well as keep the bark fresh and healthy. The reason of this is that while the bark of the tree is cool, the borer moth will not lay eggs in the bark, and if it did they would not hatch. It is only upon such trees as get heated by exposure to the sun that the borers are hatched. Even if the borer should not attack the tree, it is damaging to the tree to have its trunk exposed to the hot sun, as the sealled bark becomes shriveled, the scalled sap is diseased, and the tree becomes bark-bound and suffers. Until your trees shade their own trunks it is best to shade them by all means. Dr. Strentzel writes us that a thick coating of paint to the stem of a young tree is the cheapest and best application to keep out borers.

Rabbits of every variety are very destructive to fruit trees. In districts where they are numerous a good tight fence should be made so as to exclude them. They girdle the trees when other green feed is scarce.

Ground squirrels will climb the young stalks of trees and eat off every bud, killing the tree to its roots. They also rob the trees of fruit. Kill off the squirrels.

Caterpillars should not be allowed to denude the young trees of foliage. Look out for this with a watchful eye.

The green aphis, the woolly aphis, and the scale insect are best kept away by washing with strong soapsuds, in which *a little* kerosene carbolic acid is put. Too much kerosene is injurious to the tree. Dry lime dust is also good for the green louse.

Allow no horses, cattle, or sheep to run in the orchard. Pigs and chickens will do no harm ordinarily. Only when pigs can get no other green feed, they may girdle the trees.

Chickens should be allowed the run of the orchard. There is no better range for them, and they will eat all sorts of destructive insects, also many weeds and seeds.

The few hints given above are the conclusions drawn from long experience and deliberate study and thought, and may be depended upon as being reliable advice.

We will now give a

LIST OF BEST FRUITS FOR A FAMILY ORCHARD.

In this list we have been assisted by some of the best orchardists in this State, and rely chiefly on the suggestions of Mr. G. W. Tarleton of San Jose, than whom there is not a more careful, thorough or better orchardist in California. His word is authority upon this subject. The number and proportion that we give is for a common family orchard. Persons planting trees for market should of course be governed by a different rule.

APPLES.

Early—Three Red Astrachan; 2 Red June; 2 White Astrachan; 2 Golden Pippin; 3 Skinner's Seedling, or Maiden's Blush; 1 Gravenstein; 1 Early Sweet Bow, for baking. The Golden Pippin is a very tart and high flavored apple, making it desirable for cooking and drying. It does not dry white as some; not so fine for market as for home use. The Gravenstein falls from the tree badly before ripening, but is fine for eating. Skinner's Seedling hangs well to the tree, is an extra eating and cooking apple, and good for drying.

Early Winter Apples—Six Yellow Bellflower; 2 Jonathan; 1 Smith's Cider.

The apples that dry white, and are in demand by the Alden factories for dessication are Skinner's Seedling, Gravenstein, Smith's Cider, Fall Pippin, Wine Sap, and last but not least, the Yellow Bellflower.

Late Keeping Apples—10 Yellow Newton Pippins; 3 White Winter Pearmain; 1 Nickerjack, and 1 late Talman's Sweet.

This makes 35 apple trees, all extra good kinds for California. There are other sorts, favorites with some. Of course we advise each person to have a tree of *his* favorite in addition to this list.

For an apple orchard for profit where winter apples ripen late, as in Santa Clara county, and keep well, the Newton Pippin is the very best one to plant. Some orchardists say the *only* one from one acre to a hundred acres would be the Newton Pippin.

This selection will make a respectable orchard for any farmer for family use. Persons living in the hot interior valleys should consult orchardists there as to what particular early varieties are most profitable for early market. For a family orchard the varieties we have mentioned are very choice, and succeed each other admirably in the very order in which we have given them.

PEARS.

Early and Late, as they come in succession. — Two Dearborn Seedlings; 1 Madaline; 2 Buerre Gifford; 4 Bartlett; 1 Sickle; 2 Flemish Beauty; 3 Buerre Hardy; 2 White Beyenner; 5 Winter Nellis; 2 Easter Buerre. There is no better flavored pear for drying or canning than the Bartlett; but owing to the softness of the core when ripe enough to dry nicely, it will not hold to the fork of a paring machine, and is not so profitable for the drying factory as the Flemish Beauty, which is round, smooth, easily worked on a machine, and is one of the very nicest drying pears. But for home use the Bartlett is the best, and brings the highest price in market of any dried pear. Last year we named Glout Morceau and Swan's Orange as desirable drying pears. But we find by further investigation, and advice, that it was a mistake, and we no longer recommend them. The Flemish Beauty is an excellent drying pear. Its shape is round and smooth, it dries white, has a fine flavor, and for easy working and desirable qualities has no equal. Of this there is no mistake. The best shipping pears for Eastern markets are the Winter Nelis and Easter Buerre. At one time the Bartlett and Buerre Hardy were thought the best, but they do not keep well, and arrive there when Eastern pears are plentiful, while the winter varieties get there in a sound condition and at a time when Eastern pears are not brought into competition to lower prices.

With pears as well as apples, those varieties that keep longest should be cultivated in the greatest quantities. The Bartlett and Flemish Beauty being excellent to dry and can, should give them preference for this purpose.

The Winter Nellis is the very best flavored late pear for home market. The Easter Buerre is chiefly valued for its long keeping qualities. It lasts after all others are gone.

QUINCES.

Two Orange variety. Quinces are excellent baking fruit, and for canning, either alone or with pears. The trees should be grown like a shrub, and not be pruned up into a slender tree.

PLUMS.

One Cherry Plum; 1 Early Golden Drop; 1 Royal Hative; 1 Jefferson; 2 Columbia; 2 Green Gage; 2 Ickworth's Imperatrice; 2 Coe's Late Red. The latter plum will last till Christmas, and is desirable chiefly for its late keeping qualities. Best for canning — Green Gage. Best plums for drying, are Jefferson, Washington, Ickworth's Imperatrice, Columbia, Rein Claud de Bavey, General Hand and Royal Hative. The Columbia and General Hand are really the best, as the flesh of both is remarkably firm and substantial. The Royal Hative is a fair drying plum and an immense bearer. Soft, mushy plums are not desirable for drying, but the plum that has a rich flavor, solid pulp and is easily pitted, is a drying plum. The Quackenboss is called the best shipping plum, owing to its beauty and keeping qualities.

Nurserymen graft or bud a good many peach stocks with plums. The following kinds of plums do as well or better on peach than on plum roots when planted on light, drained soils, (but remember that for heavy soils, plums do best on plum roots,) viz: Royal Native, Yellow Egg, Jefferson, Imperial Gage, Duane's

Purple, Columbia, Rein Claud de Bavy or late Green Gage, Ickworth's Imperatrice, General Hand. The prunes all do well on peach roots in light soil, also. The plums that do *not* succeed well on peach roots are: Quackenboss, Early Golden Drop, Coe's Golden Drop, and Coe's Late Red; also the true Green Gage. The Quackenboss will grow well on peach roots for a few years, and then all at once die.

PRUNES.

Two Grosses Prune de Agen; 2 Petti Prune de Agen; 3 Fellenburg. The Fellenburg, or German Prune is the best drying prune, and is coming into high favor on that account very fast. It pits *naturally*, is high flavored with firm flesh. The Petti Prune de Agen stands second, but is rich and fine, though small. The Grosse Prune de Agen is best for shipping, owing to its beauty, size and solidity. It adheres to the pit too tenaciously to be a favorite for drying. This is what we wrote last season. But now that Mr. Tarleton's cling-stone fruit-pitter is invented, we regard the Grosse Prune de Agen as the most desirable drying and canning prune. For a market prune, it is by far the most desirable, especially for shipping to the East.

PEACHES.

Freestones—Two Early May, 2 Hall's Early, 2 Early Crawford, 2 Strawberry, 2 Late Crawford, 2 Salway; or one each if you choose.

Clingstones—Two Lemon, 2 Orange, 1 George 4th, 1 Newington. The clings are now made valuable for putting-up-fruit, by Tarleton's pitter, and may be cultivated with profit in large numbers. This list of peaches has been carefully revised to suit the San Jose climate. Persons selecting varieties for hot, dry sections of country, may choose differently.

NECTARINES.

One Hardwick, 1 New White. The nectarine is not generally a favorite for eating, but as it is smooth-skinned, like the plum, it makes a very fine fruit when dried or canned.

APRICOTS.

Two Early Golden, 2 Moorepark. Nice for cooking, canning and drying, as well as for eating. This fruit ripens before peaches, and is an indispensible fruit for succession in a family orchard. The Moorepark is the best market apricot.

CHERRIES.

Two each of Governor Wood, Black Eagle, Black Tartarian, Black Arabian, Coe's Transparent, Kentish or Pie, Cleveland Biggarean, Napoleon Biggarean. The Black Tartarean is the most profitable market cherry, owing to the regular and good bearing quality of the trees, and to the solidity and carrying quality of the fruit, which will not discolor when bruised, and is large, handsome, and of fine flavor. There is no better canning fruit than the cherry; also good dried. Do not be deterred from planting cherry trees from fear of the birds destroying them. Better double or treble the number and feed the birds. Remember that the birds want "meat as well as bread," insects as well as fruit, and that you will be the gainer to call them to your orchard, even if they eat all of your cherries. But don't be alarmed; you can manage to get a taste while they are enjoying a meal without shooting or otherwise destroying the birds.

MULBERRIES.

Black and Downing's Everbearing. Trees ornamental as well as good for fruit. This fruit ripens about the same time as the cherries. Birds are very fond of them. Plant these for the birds, among or near your cherry trees.

FIGS.

Take a variety. The Black Brunswick, White Smyrna and Brown Turkey are as good as any. The strong-growing kinds make fine, spreading ornamental trees.

ORANGES.

The Navil, St. Michel and Sicily are leading grafted sorts. Experience is yearly showing more and more the adaptability of this semi-tropical fruit to all portions of our State below the snow line in altitude. It requires shelter from winds to succeed first rate anywhere. After the tree is large enough to provide a thick shelter of leaves, it will withstand our heaviest frosts without injury. But while small it should be protected by a tent shelter made by tying the tops of three stakes together over it and wisping straw around or covering with sacking, so as to break the frosts during winter. The orange should be regarded as a most indispensable fruit in a family orchard, and for market it will pay in any warm sheltered locality. In Italy the finest oranges are grown in the coolest climate near the coast, in a very sheltered place, in light, rich soil. The orange is a beautiful evergreen tree, at any season, and when in blossom or in fruit is almost matchless for rich beauty. It is worthy a place in every front yard where there is appropriate room for any sort of large evergreen.

The same may be said of

LEMONS AND CITRONS,

Which belong to the same family. The lemon is quite as hardy as the orange. Plant some of each.

These trees being evergreens should be treated the same as other evergreens. A ball of earth should be taken up with and about the roots and be either boxed or tied in sacks before moving. In transplanting disturb the ball of earth about the roots as little as possible.

OLIVES.

The time will come when no orchard will be considered complete in California without the olive tree. What butter is to the American housewife, that is olive oil to the Spanish and Italian domestics, in those portions of the country at least where the oil is abundantly produced. It is used upon their tables as butter is upon ours; is used in cooking the same, and is an indispensable article for many other purposes, of which it is hardly necessary to make mention here. The tree may be grown as an ornamental evergreen. It is easily propagated from cuttings from one to three inches in diameter. The tree will do well on dry soil but the cuttings will grow only in moist. Include a few trees in your order to the nurseryman.

NUT TREES.

Black Walnuts—These make tall trees. It would pay any man who has a place to plant a grove of these for fruit and for timber, which is very valuable. Plant several in the orchard anyway. The American Black Walnut is the only sort worth cultivating. The "California" is of no value.

The Pecan nut is also a valuable fruit, and the timber is nearly as good as hickory for wagons, etc. It is native of a climate similar to ours, and will be a success in California.

The Hickory so far as tried appears at home in California. It is worthy of a trial everywhere.

The Chestnut is no longer an experiment. It grows finely and bears abundantly. The three leading varieties are the American, Italian and Spanish. Try a half dozen of each.

The English Walnut is really a semi-tropical nut tree of low branching habit. There is no nut of greater value for food. It is at home in California, and must prove of material value to the State. Six trees at least should be planted. The Black Walnut and so-called English Walnut and Chestnut trees are grown in nurseries quite extensively, and are easily moved at one and two years of age, and can be transplanted with safety. The Pecan and Hickory are better planted where they are to grow. Good seeds should be furnished by nurserymen and seedsmen generally.

The Almond, although a nut, partakes in its nature to the habits of the peach tree. The early blossoms are tender to frost, but it is found to do admirably in California, and quite extensive orchards are now growing in various parts of the State—several near San Jose, with success. Half a dozen trees should be included in every family orchard. The Languedoc and Ladies' Paper-Shell are good standard varieties. The former is a fine bearer and withstands the frosts best. Several new sorts of soft shells have lately been produced from seed, but we do not know which of them to recommend.

GRAPES.

More attention should be paid to family vineyards. There is no fruit of more value than the grape for food.

For a trellis plant out American varieties, such as the Sweetwater, Delaware, Catawba, etc.

A good selection of foreign varieties must include about 10 Rose Peru, 10 Flame Tokay, 50 White Muscat of Alexandria, 10 Black Bamburg, 10 Black Malvoise, and 10 Zante Currant Grape.

The white Muscat of Alexandria is the very best raisin grape. Any family can make their own raisins nicely, and send some to market. The best shipping grapes are White Muscat of Alexandria and Flame Tokay, so far as tried, for profit. For canning, high flavored grapes are best.

The American grapes are best grown from rooted plants Cuttings of all foreign varieties do about as well as rooted vines. A cutting should be eighteen inches to two feet long. The strongest new growth of vines make the best cuttings. The lower end of the cutting should be planted at least one foot below the surface and the vine be bent around or laid slanting to the surface, planted firmly in the soil, leaving one or two buds exposed above the ground. No large hole is needed. A narrow spade will remove all the earth necessary to introduce the cutting. Two men can plant an acre in one day. Lay off the ground so as to plant them about 8 feet apart.

BERRIES.

These should not be planted in an out-of-the-way place, and neglected. They will as well repay for care as anything else in an orchard or garden. Perhaps they more properly belong to the garden. Irrigate when you can.

Blackberries.—Plant 50 Lawton and as many Kittatinny. They are excellent fruit for the table, to can, and to dry.

Raspberries. — Twenty-five plants in variety. Plant blackberries and raspberries about three feet distant from each other, in rows eight feet apart. Good healthy roots should be selected; the tops will grow from the roots. Irrigation is beneficial.

Currants.—The Cherry Currant is by far the best, but a few of other varieties may be tried. 25 plants will give a family all they want. A moist soil is best for currants. If they are planted to correspond with rows of grapes, plant 8 x 3 feet, and allow the stalks to multiply in stools. It saves trouble in cultivating with a horse, to plant uniformly in rows.

Gooseberries.—Plant same distance as currants. The Houghton Seedling is the standard kind. Allow them to branch low down, and grow about as they please, trimming once each season.

Strawberries.—On almost any kind of soil strawberries will do well if abundantly irrigated. The surface soil must be kept moist. During fruiting time the leaves absorb through the roots a great deal of water. Persons who can irrigate should have a nice bed of strawberries. The Langsworth Prolific and Jocunda are standard sorts on this coast.

RHUBARB AND ASPARAGUS,

Though belonging to the garden, are standard plants, and require special care. Plant Rhubarb about the same distance apart as currants. Manure liberally, and water if convenient. Asparagus may be planted in beds, 18 inches apart, and manured heavily, keeping down all weeds. All nurserymen keep Rhubarb and Asparagus roots for sale, as also the other trees and plants above mentioned.

We invite our readers to *ask questions* upon all points wherein they want information not given in this article. We cannot pretend to give every instruction in a single article like this, but we aim to be strictly correct in what we do say.

Semi-Tropical Fruits.

The following article on semi-tropical fruits we find in the Florida *Agriculturist*. It was written by Mr. F. Branch, a member of the Florida Fruit Grower's Association. We believe it will be interesting to readers in California, as it contains much desirable information:

Much has been written upon the subject of oranges, their culture, the soil best adapted to their growth, the proper method of pruning, the diseases to which they are liable, and their cure. There is one disease which prevails extensively in this part of the State which seems to defy all local remedies. I refer to the scale insect. I have tried most of the remedies that have been recommended, and have failed with every one. I have tried diluted carbolic acid, carbolic soap, aloes, potash in solution, spirits of ammonia, &c. I have also tried inserting sulphur into the body of the tree. All have failed. That which seems to be most beneficial is thorough manuring and high cultivation. Much complaint has been made by shippers of fruit on account of a brown discoloration upon oranges (probably a fungi), which has prevailed to some extent in this region. Lime freely scattered over the soil under the trees in winter, and well raked in, has been recommended. I have tried it, and proved it a success. But why do people run mad about the one fruit (the orange), whilst another fruit, probably far more remunerating, is neglected? The Sicily lemon usually sells higher in market; will bear fruit two or three years earlier from the seed; is in constant bearing for nine months of the year; will bear transportation far better than oranges, and the tree, if killed by the frost to the ground, will grow up and commence bearing again in half of the time required by a frost-bitten orange tree to recuperate and commence bearing.

THE GUAVA

Is destined, at no distant day, to occupy an important position amongst the fruits

of South Florida. Guava jelly has a world-wide reputation, and when the fruit shall have passed into the hands of the manufacturer of jelly its real value will be appreciated. Like the Sicily lemon, it bears almost every month in the year. Although it is a semi-tropical plant, it has been killed by frost but once on my lot, in Tampa, for fifteen years.

PINE-APPLES

Are grown successfully here. I have tried them for several years past upon a small scale, and have found no difficulty in maturing the fruit every year. Like most other fruits, a rich soil is best for their growth, but they grow well upon the sandy soil of Tampa without any manure. If kept well mulched with straw, hay, or moss, they do well without culture. The spiny edges of the leaves renders their cultivation very uncomfortable.

THE PAWPAW

Is considered by many one of the most pleasant fruits grown in this region. It bears fruit in fifteen months from the planting of the seed. The fruit, grown upon good soil and well cultivated, grows to the size of the head of an adult, and the taste of the fruit bears a very close resemblance to that of the muskmelon. The fruit is attached to the body of the upright trunk by a stem three inches in length, and they grow in such a crowded manner that half-grown fruit is often forced from its position, and falls to the ground. I has no leaves except upon the top of the trunk. This plant has attracted the notice of strangers more than any other in Tampa for years past.

THE MANGO,

Although a very tender plant, has been grown successfully in this county. Mr. Matchet, of Clear Water settlement, recently sent to this market a quantity of the fruit, which was quite delicious. If planted in moist land it is very sure to be injured by winter frosts, but usually survives the frost if grown in tolerably dry soil.

CITRON

Trees grow well here. They withstand the frost well, and bear abundantly a fruit of very largy size, not edible, but used for making very valuable preserves.

THE LIME

Tree flourishes here. It bears the smallest fruit of any of the Citrus family, yet contains more citric acid than any other of the family, and will one day enter largely into the fruit culture of South Florida.

But what shall I say of the

SUGAR APPLE?

I wish I could send a large ripe apple to each member of this Association. In this fruit is realized the fullness of the saying, "it is so rich that it melts in the mouth." I have grown the fruit for years. The tree bears the frost well; does not require very rich soil, and but little cultivation, and bears abundantly. I have never seen a person partake of them who was not enamored therewith. Unfortunately for persons who cannot visit South Florida, their mouths will water in vain for sugar apples, for they will not bear transportation.

THE ALLIGATOR PEAR

Grows here luxuriantly. Large quantities are now ripening and falling from the trees. The trees are from fifteen to forty feet high. The fruit is pear-shaped—four times larger than a bell pear. The edible part is the pulp surrounding a very large seed, and is prepared by shaving or scraping off, seasoning with salt, pepper, and vinegar, and is very much admired by those who have acquired a taste for it.

But one of the most useful fruits which grows in South Florida is the

BANANA.

In some places it supplies the place of bread. Still it is not the bread-fruit tree so eloquently described by Captain William Hendrick, when lecturing in Syracuse, New York. This plant requires a rich soil—loam, if it can be had. Its numerous small roots do not give it a firm hold upon the soil, therefore deep cultivation is inadmissible. If well mulched very little else is required. The plant is rarely killed by frost in this climate. Its fruit is exceedingly pleasant and very nutritious.

POSSIBILITIES IN FRUIT CULTURE.

The cultivated fruits of our day have all sprung from vastly inferior wild fruits. It is not claimed by scientific pomologists that any of them have yet been brought to their greatest perfection. New varieties of each kind may and probably will be produced, that will far excel anything now known in richness of flavor, nutritive excellence, beauty and value. It has taken hundreds of years of careful culture and selection to progress to the condition where we now find our cultivated fruits, and the progress is only begun. In a speculation upon the possible value that the wild fruits of America, under cultivation, may yet attain, Prof. Asa Gray thus talks before the American Pomological Society:

It would be curious to speculate as to what our pomology would have been if the civilization from which it and we ourselves had sprung had had its birthplace along the southern shores of our great lakes. The northern of the Gulf of Mexico, and the intervening Mississippi, instead of the Levant, Mesopotamia and the Nile, and our old world had been opened to us a new world less than 400 years ago.

Seemingly we should not have as great a variety of choice fruits as we have now, and they would mostly have been different, but probably neither scanty nor poor. In grapes, at least, we should have been gainers. Our five or six available species, of which we are now just beginning to know the capabilities, would have given us at least as many choice sorts and as wide a diversity as we have now of pears, while pears would be a recent acquisition, somewhat as our American grapes now are. Our apples would have been developed from *Pyrus coronaria*, and might have equaled anything we actually possess from *Pyrus malus* in flavor, though perhaps not in variety, if it be true, as Karl Koch supposes, that the apples of the orchards are from three or four species; our plums would have been the progeny of the *Chicasa*, the Beach plum, and our wild red and yellow *Prunus Americana*, which have already shown great capacity for improvement. Our Cherries might have been as well flavored and probably not as large as they now are. But instead of Peaches and Figs, we should be discussing manifold and most luscious varieties of Persimmon and Pawpaw, the former equal to the Kaki just acquired from the far east. As to Strawberries, Gooseberries and Currants, we should have lost nothing and gained something, as we possess several species besides the European types themselves; as to Blackberries and Raspberries, we should have been better off than now, by the earlier development and diversification of our indigenous species, and we might have had all our finest Strawberries a thousand or more years ago, these having come from our American types, (*Fragaria Virginiana*,) with its varieties, (which as well as the old world *F. vesca*, occurs all across the Continent), and *F. chilensis*, which ascends the Pacific coast to Oregon.

One of the best horticultural authorities in the United States, the *Gardener's Monthly*, upon this subject says:

There is no doubt but the Huckleberry can be domesticated and raised so as to pay in a majority of gardens, especially when the fruit cannot be picked on the wild bushes or bought in the market, which is the case in the Western prairies. Mr. Hammond, in the August number of *The Horticulturist*, speaks of the different varieties of Huckleberries, that no one had given a description of the different kinds. Prof. Gray, in his "Field Botany," describes ten varieties of *Vaccinium Corymbosum*. The Blueberry of the New England States, growing from three feet to ten feet in height, answers the description of the kind described by Mr. Hammond. That there is a great difference in the quality of the berries of this same variety there is no doubt, and if we go into the cultivation of the berry let us begin with the best, and by a course of reproduction the fruit will be very much improved. Of the different native fruits of our country the grape has the most attention, and the result has been very satisfactory. The same may be done with the native Plum, Persimmon, and the native berries, all better fruits in their wild state than the Apple or Pear was. All fruits and flowers that have been brought into cultivation have been much improved. All flowers in their *wild state* are *single*. *Cultivation and reproduction make them double.* Equally as great changes can be made in the quality of our wild fruits.

Killing Tree-Borers.

Cutting them out with a knife and plastering the wound over with clay, binding it on with sacking and strong twine, is the common effectual way; but a writer in an exchange gives his method as follows, and it looks reasonable as well as less injurious to the tree than the digging out method:

"By way of getting at this 'worm of the dust' is an easier one and more effectual. I cut a sumac, or elder, one foot more or less long, punch out the pith, cut one end with a slope, hunt the borer's hole, clean it out at the entrance with a wire, place the beveled end of my tube against it, take some putty-like clay and plaster it water tight around the end next to the tree, fill with very strong soapsuds, and the thing is done. No matter how crooked the hole is, or whether it goes up or down, the suds in the tube will force itself to the end. I have tried it two years and have not failed once. Of course any kind of small, hollow tube will do, anything that will make it water-tight will do to plaster it with."

An exchange, speaking about new fruit, says:

The Persimmon tree of Japan is recommended by an Eastern agricultural society for general adoption. Members state that the fruit is much larger than the Southern fruit; that it makes a sweet and delicious preserve, treated in any of the ordinary ways. We have tasted them put up like figs, and we can speak of their excellence. The peculiarity is greater sweetness and some aroma, which require time to accommodate all tastes. Our nurserymen have the trees and we believe they thrive well.

The Paw-Paw is also recommended. It is indigenous South. The fruit is a sort of apple, and the taste is of a kind well suited to the table. Its leaves are valuable for one peculiarity: meat, however tough, is rendered tender by being wrapped in them for four to six hours. The seeds are a capital vermifuge. In California we need additions to our list of fruits. Mexico has many.

The Zapote is as large as our apple tree: its leaves are of a richer green, and its apple-like fruit is rich and mellow as a pear. Santa Barbara has a lone lady Zapote, eighty years old, and a great bearer. Like the silanthus, the male tree fertilizes but does not fruit. The lady fruit is imperfect because no male attends.

Something About Oranges.

California's Orange Crop and Market.—The average crop of Oranges in this State is about 5,000,000, while the average consumption is about 10,000,000. In other words, we have a home market for double the number we produce. In the face of this fact, it has been frequently proven that orange culture is by far more profitable than the culture of any other fruit produced in the State. While our fruit-growers are exercising their brains to discover a channel through which to place their surplus apples, pears, peaches, plums, etc., into a good and paying market, would it not be well for them to turn their attention to the production in greater quantities of those kinds of fruit for which there is a good market at home? Again, of the thirty-six States now in the Union there are but two or three in which oranges have been produced to any extent, while California is undoubtedly the best orange-growing State in the Union. Allowing the average consumption of all the States to be 10,000,000 oranges annually—and it certainly is much greater—the United States presents a market for that fruit equal to 360,000,000. Here, then, is a fruit market that it is worth the while for our fruit-growers to look after and supply. Another consideration in this connection: it needs no Alden process or any other to prepare the orange for market. Another is, that the tree once in bearing and well taken care of will continue to bear in increased quantities and of improved quality for a lifetime. Another is, that the foothills, where land can be had in abundance for $2.50 per acre, is the best place in the State for orange culture as well as for the culture of most other varieties of fruit.—*Record-Union.*

Inferior vs. Good Fruit.

The sure result of careless culture is poor fruit. Trees are likely to produce more fruit sets than will come to the highest perfection of pulp growth, in our prolific climate. The following from the San Francisco *Chronicle* is sound upon this subject:

A large amount of fruit rotted under the trees this year for want of a market—not the best fruit, of course, but where there is such a crop as the present only the finest can be sold. Even the fruit canners and dryers will not purchase small and inferior fruit, and as the San Francisco market is supplied, this class of fruit must either rot or be fed to the hogs, and as there are generally no hogs to feed it to, it rots. This is the result of carelessness. We have seen trees loaded down with apples that looked

to be not more than half grown, the branches broken by the weight, and the crop almost a total loss for want of a market. A little time spent in pruning the trees and thinning the young fruit would have saved the trees and caused the fruit to grow to perfection. Such is economy as practiced by some of California's farmers. This is probably one of the main reasons why there is so much inferior fruit in the State, and it is this class of orchardmen who talk about digging up the trees and sowing the ground to wheat. If the trees are not of the right kind, it is an easy matter to graft them. If they are too full of blossoms in the spring, the fruit buds should be thinned out. Formerly the culled or inferior fruit could be dried or canned. Not so now. The State is supplied with good fruit, and the man who spends his time paring small apples or scrawny peaches, and dries them in the sun, will find his time wasted. There is a market for fancy fruit for shipment, for local consumption and for various purposes, but there is no provision for an inferior quality.

Fig and Almond Culture.

The following from the *Rural New Yorker* we give place to as encouraging the culture of almonds:

The cultivation of the various fruits adapted to the climate of the Northern States have been extended until our markets are fully supplied with all, very few, if any, being imported. But the same cannot be said of the Southern States, for although the climate seems to be especially adapted to the culture of the fig, almond, orange, lemon and other tropical fruits, still we look in the main to foreign countries for a supply.

Why should we import millions of dollars worth of figs and almonds while the Southern States could readily supply our markets? Is it for the want of a proper knowledge of their culture and lack of energy, or scarcity of labor? Of course, it is not for us up here in the North to answer these questions, as apples, peaches, pears and similar fruits mainly occupy our attention. But it does seem to us that the people of the Southern States ought to be able to supply us such easily raised fruits as figs and almonds as cheaply as they can be bought abroad, counting in the cost of exchange, freight, insurance and other unavoidable expenses.

Some of the varieties of the almond succeed as far north as the most hardy sorts of peach, but these are rather inferior; besides, there is really no certainty of obtaining a crop. The finest sorts, like the long hard-shelled and ladies' thin-shelled, are rather tender, and can only be depended on in a warmer climate, say North Carolina and southward.

These varieties are as readily propagated as the peach, and the trees are not only quite similar, but are liable to the same diseases and insect enemies. A warm, dry soil is best, and if quite rich, so much the better, not only securing a good crop of fruit, but long life to the trees.

The finer varieties, such as we have named above, may be propagated by budding, upon seedling almond stocks, or upon peach and plum, the latter being preferable in localities where the peach tree borer abounds. The plum stock, however, has a tendency to make the trees somewhat dwarfish in habit, but this is not objectionable so long as the vigor and productiveness of the tree is not impaired by its use.

When the almond is ripe the flesh or pulpy covering of the nut dries and cracks open, permitting the former to drop out. A man who raises almonds is not obliged to send them forward to market on a certain day, as with peaches, or lose his crop, but they can be gathered and held for weeks or months if necessary, to secure a good price, and this is an advantage which should tend to increase their culture, especially in localities not contiguous to good facilities for reaching the markets in our large cities.

Semi-Tropical Fruits in the Foot-Hills.—One can hardly name anything that would not grow to perfection in these foot-hills. We have on our table an olive twig, with several fine olives, fully ripened, a beautiful cluster of oranges, as large and fine as any we ever saw, and a sprig from a fig-tree, also covered with ripe and luscious fruit. These twigs were all cut from an orchard at Ophir, the 17th day of December, and the fruit on them is as well developed, fully ripened, and highly flavored as any that grows in the tropics. In the same locality is a great variety of fruits and nuts. Among the latter are the English walnut and the pecan, both of which do well. Along with the fruit we have a splendid bouquet of roses, gathered from a garden in Auburn. Oranges, figs, olives and roses, within a week of Christmas, are not at all remarkable here, we know; but we think our Eastern friends could appreciate the climate that produces them, especially when they remember that by climing the Sierras a short distance, and without going out of Placer county, we can find ice six inches thick and snow four feet deep.—*Placer Argus.*

The People at Riverside evidently mean to take advantage of all their tropical resources. There are no less than 60,000 orange trees from three to eight years old, growing within the limits of that colony. There are also several thousand lemon and lime trees, some of which have already come into bearing. In all portions of Southern California the orange is cultivated as a standard market fruit. It should not be longer neglected in any portion of the state below the snow belt.

Packing Oranges.—S. F. Gard, in the Florida *Agriculturist*, says:

A word as to packing. The keeping qualities of the orange are much affected by the manner of handling in packing the fruit, and of the handling of the package after being packed, as well as by the condition of the barrel or box, in respect to fitness for use.

The fewer times the orange is picked up and laid down the better it will keep. The aim, therefore, of the orange-grower, should be to handle his fruit as little as possible, and as carefully as possible. After the oranges are taken from the tree they should be laid under cover, on a floor high enough above the ground, with the planks far enough apart to admit a free circulation of air, and should remain there at least twenty-four hours to sweat and shrink, as they always do, before they are packed. This gives time also for any bruise or damage caused by picking to show itself. All damaged ones, no matter how slight the damage, should be laid aside. Only sound ones should be packed. The packing should be done in the orchard, to prevent bruising the fruit by handling it in a loose condition too often. After the fruit is packed the packages should be handled with care. It will pay in the end. Taking all the circumstances together that bear upon the keeping qualities of the orange, as well as the price of the box or barrel, preference must be given to the box in packing. The most convenient size and shape is that of the common lemon box, holding about one-half barrel.

A THANKSGIVING STORY.

As Told by "Old Dave."

BY NELL VAN.

It was in a miner's cabin on the North Fork one bleak November night, that old Dave gave the fire a punch, and sung out: "By hokey, boys, if this ain't the last Thursday in November and Thanksgiving in old New England, as sure as I'm alive."

"That's so," said one. "Come on," said another, "let's celebrate."

"Well," said old Dave, "I'm willin'. Just name your play and I'm in for it, you bet."

A tall, freckled-faced youth, who went by the name of Ned, drew near and suggested "riddles." Another called for a "yarn," and it was finally agreed to draw lots for the one to relate a Thanksgiving story, with riddles and something to eat afterwards. Slips of paper were folded and well mixed in a hat, and the longest strip was found in old Dave's hands. A shout went around, for he was called a cute one at spinning yarns. "A thanksgiving story, and a true one, too, do ye say? Well, it's not a few Thanksgiving days that's passed over my head, to be sure; but—yes, there was one I shall never forget. You may like to hear about it. You see, lads, when I was a boy I chanced to be thrown on the world to look after myself; and farmer White, needing a chore-boy, took me in and gave me board and clothes for what I could do, intending to make a farm hand of me, which he did in the course of time. Now it's pretty rough on a youngster, naturally fond of play as I was, to be set down to hard work; but it's been the makin of me, that I *do* say. In looking about the world, you'll find that those who raise in life most generally have had to tough it in their young days, so it pays in the long run to be stood alone airly in life.

"Well, farmer White was just setting out in life; had a good farm earned and paid for; a smart young wife, and old aunt Rhoda to help see to things indoors. There was milking, butter and cheese making, pigs and chickens to feed, besides wood and water to fetch, all of which I had a hand in. 'Twas a mighty good home there at the farm for a boy like me—everything regular as clock-work, no youngsters to bother nor hinder, though just afore I came they had buried a fine boy eight or ten months old, which well-nigh broke their hearts. Thanksgivin' time came around with its usual preparations. No end to the choppin' of mince-meat and apples, and pies enough baked to provision an army. Such stacks of good things as filled the buttery shelves it fairly makes my mouth water to think on.

"Of course there was to be a family gatherin', for uncles, aunts and cousins can always be found ready to go to a Thanksgivin' feast. Turkeys and chickens were killed and stuffed, and all the good things ready the day afore hand, so that all hands could go to meetin' in the forenoon. For what was Thanksgivin' without the sermon to start in upon? Then everybody, decked out in their Sunday go-to-meetin' rig, went home for a grand feast and a good time generally. Some of you fellows here know all about that part of it, I'll warrant. How many of you here are Yankee born? Only three besides Ned? Well, I vow, I thought more on you knew what Thanksgivin' meant. Howsomever, the day wore on and evenin' twilight found as young folks all sittin' round the fire listenin' to aunt Rhoda's droll riddles and enigmas. Two on 'em I remember now just as she said 'em, stamping her foot to keep time—a way she had: 'My mammy sent we over to borrow your wimblebow, ironbow, sacritybow, wobody, lyricky, and the whirligig!'

"Well, now; that's a good one," shouted Ned, rolling backward over the floor. "Say it over again." Dave repeated it gravely, and after some guessing told them it was a spinning wheel and reel. Ned said he knew it all the time.

"Then," said Dave, "here's another: 'Up and down turnigig, such as folks pump with.' Then the laugh went round, and ned suggested a churn. "Yes, by thunder," said Dave; "born yankee, every inch on you—six foot at that."

"But the story, Dave," sung out Ned; "let's have the rest." "By all means, yes," said another.

"Well," continued Dave, "where was I. Oh, listenin to aunt Rhody's riddles, when rap, rap, rap, at the door, and before we could open it a little moan. There had been a fresh fall of snow, and sleighin' was only tolerable, but the air was crisp and prospects of a freeze. Aunt Rhody up and starts for the door, but I got ahead of her and opened it first, and what do you think, boys, sat there on the door stone? Why, a big old-fashioned band-box, such as our grand-mothers used to carry their best bonnets in when they went journeyin'.

"What's this?" said aunt Rhody, and with that the whole crowd came to the door and we fetched it in front of the fire, whilst some one lit the candle.

"What's the rampus?" said farmer White, coming in and seeing the big box tied about with a silken string, he whipped out his jackknife and slipped it, when the lid was raised, and there lay a little two-months old baby, on a pile of new flannel and soft blankets! Such a time as there was among the women folks. One said one thing and another talked baby talk. Never a word or line came with it, though we searched the box in and out, save the word Frank written and pinned to the dress front.

"He's come to take the place of the one we lost, mamma," said the farmer, gently patting his wife's cheek, as she sat in the low rocking chair looking down upon the sleeping babe that lay in her lap. She smiled sadly, as if thinking of her own white baby gone to its long home, and of the mother who was, perhaps, lost to this little one. "We will be everything to each other, darling," I heard her say as she raised the tiny face to her lips. Where can it have come from? and Why brought to the farm? were questions quite as puzzling to the grown folks as aunt Rhody's riddles had been to the children.

When the excitement had died away, and baby was laid sleeping upon the bed, the young folks had some romping games, and then cracked nuts to eat with apples and cider, before tackling up teams to go home. I mind now I tracked the footprints in the snow to the roadside where traces of wagon wheels were found, and next day the town folks had seen a covered carriage driven through in the direction of the farm, but nothing more could be found out; leastways the boy hived and was fetched up on the farm

—a bright, curly-headed little chap, with brown eyes, and hair with the least tinge of red enough to make him look saucy-like. The farmer's wife had one, and they grew up together like twins, but *so* different in every way. Then in a few years more boys and girls came along, and I mind the year I left, after haying time, a goodly crowd of small fry begged to help load hay, while staid Frank raked after.

"The Summer afore the gold fever broke out I chanced to be in that part of the country in search of work, and stopped to see farmer White's folks. They seemed proper glad to see me, both him and his wife, and Aunt Rhody too, who told me how much they all had missed me. And had I come back to stay agin? Times were busy, the farmer shorthanded, and nothing would do but I must take hold and carry 'em through harvesting. You may be sure that suited me to a dot. The children clustered around, all remembering me, but grown past my recollection.

"There was Frank, a man grown, and Jim, not far behind, while Madge, a blue-eyed, prattling, four-year-old, who had been my special pet, was now a timid, blushing maiden, with hair like spun glass floating over her bare shoulders. I thought she was the prettiest creetur I ever sot eyes on, but oh what a change a few months brought about!"

"Did she die or get sick?" asked one, while Ned looked up wistfully, not daring to speak. "No," drawled out Dave, "not exactly, but she might better have gone than grieve 'em all with her sad, sorrowful looks. Well, as I was a-sayin', I stopped there that year way into the Fall, apple parin' time. There was lots of fun around the kitchen hearth, and I was duly cautioned never to whisper to Frank or to any one about his not being their own.

"The little school-ma'am who taught the district school that term boarded around a week at a place, and when it came her turn at our house she questioned considerably about Frank, he being so very different from the rest. And I had often remarked the same, which to me seemed queer, seein' as how they all had been brought up alike. He'd sit by the hour, studyin'-like, looking into the fire, and not noticing what fun was goin' on around, or with a book he'd lie by the half day under a haymow in Summer time. Now Miss Shaw, the schoolma'am, was a studyin' up hereditary transmission—the laws of descent, or inherited traits handed from one generation to another. You know what I mean, boys. Well, in Frank she could not see a spark of resemblance to any one of the family. Getten' no satisfaction out of nobody, she was forced to set him down as a sort of freak of nature, or one of God's peculiar providences.

"There was a great temperance revival about this time, and folks went from house to house for signers to the pledge. When they came to Frank he obstinately refused to sign, saying he had always loved the smell of wine and liquor and should sometime want to taste it. He never meant to make a promise which he might be tempted to break. The others, from oldest to youngest, signed and urged him to, telling him of the terrible effects of the habit, once formed; how whole families were ruined by a father's indulgence in drink, etc. It was all to no purpose. He insisted that he could keep from forming the habit as well without signing as with it, and he never meant to bind himself by a promise. Miss Shaw looked from one to the other of the parents, and wondered how they could have such a child and not compel obedience, as she said to me.

"This was the first taste we had of Frank's willfulness, and considerable anxiety was felt, you may be sure. He was hot-headed and high strung, but easily led if rightly approached. The mother had governed with a firm hand, but gently, influencing by love rather than fear. The boy had a fashion of going to the town on horseback for the mail, and sometimes stopping by the way, as boys will, for a chat with the fellows. One night he came home raving; threw the letters upon the table, and stalking up to his mother's side (Miss Shaw was not there. I was glad of that), said excitedly: 'Now, mother, the time has come for you to tell me the whole truth. I have been taunted and sneered at all my life; been called red-head, sorrel-top, the red sheep of the family, and such, by pesky rattletraps about town. But when it comes to being called a tuckaway brought to the farm in my mother's band-box, and a red-headed bastard, it is more than human nature can bear. I've just given a fellow a clip for saying that, and expect to be brought up for it. Tell me truly, now, am I really your son, or the miserable tuck-away they call me?' Aunt Rhody here spoke up: 'Tell us, Frank, which is the true mother of the chicks, the hen that lays the eggs or the one who fetches up the brood?' and farmer White looked up from his letters to say something about the ridiculous fashion some folks have of meddling with other folks' affairs, and making remarks if all the children of a family are not exactly alike.

"All this time Frank stood looking into the saddened eyes of his mother, who rose, and putting a hand upon each shoulder, asked him if she had ever given him cause to question her love and devotion to him; had she ever shown him less affection than the others—looking into his eyes so pleadingly that the boy sank into a seat and covered his face with his hands, sobbing as if his heart would break.

"That was a sorry time at the farm. The danger of Frank's discovery haunted us like a nightmare, and to settle matters it was agreed to let him go to New York to visit a friend of Aunt Rhody's who had been at the farm that year and took a mighty fancy to him. His clothes were packed into a small trunk and he set off in good spirits, kissing all gaily and promising to send something to Madge, who was fairly crying.

"It was then I first learned the beginning of Frank's history. Squire Bell, who lived in the great house down by the meadow, had an only daughter, Fanny, who grew up handsome, and like all the rich men's gals must be sent to a fashionable boarding school. She went to New Haven, where she soon made the acquaintance of half of the students of Yale College. During vacations, when she was at home, there would be lively times at the Squire's between Fanny and her numerous beaux. But there came a time when word was sent from the seminary that Fanny was missing; it was feared she had eloped with a Yale student. The Squire packed his trunk and set off at once, leaving his wife to fix up things and close up the house and follow him. For fifteen years and more the family have been abroad traveling, and not a trace of their daughter had they found.

"There were now great doings at the Squire's old mansion, for word had come that they were to return home to spend their last days. Painters and upholsterers were at work fixin' things, and folks began to wonder whether Fanny could be coming with them. One day a modestly dressed lady knocked at our door and asked to see Mrs. White. She went into the sitting-room, and long they talked alone together.

"Then as I was knowin' to the rest, I was told after she had gone that the Squire's daughter had married a good-for-nothing gambler and drunkard. She had been left alone to struggle in a foreign land; had taken steamer for home with a young babe; came to her native town; learned that her parents were gone traveling; was taken down with a fever and was expecting to die—so gave directions for the babe to be brought to Aunt Rhody's care at Farmer White's, feeling that she then could die in peace. Her doctor ordered change of air. She rallied, got well; traveled with a former schoolmate to her home in Germany, where she hoped to fall in with her parents. A young nobleman fell in love with her, and she was induced to marry him and live in a castle on the Rhine. Her heart so misgave her for deserting her child that she could have no peace. No tidings of her parents, and she was in a peck of trouble, though her German count was as fond of her as he could be. They at last decided to travel, and at Paris chanced to meet her father and mother in the hotel parlor. A return to America was planned, and this was Fanny herself come to claim her child.

"He was expected home the next day, but did not come. Another, and still he stayed away. Then they wrote; no answer. At last, alarmed, the good man started for New York to bring him back. He was nowhere to be found; had left for home at the appointed time, and may have gone to California or the ends of the earth.

"My story's done." "But Madge," cried Ned breathlessly, "what about Madge?" Then it was that old Dave lifted his eyes, and for the first time recognized Frank in the freckled lad before him.

"Oh, she's waiting for you still, my lad. I have a letter here from her brother, who charged me if I found you out here to give you a message.

"And you are really he? Let me see, how old might you be? Twenty-seven, do you say? And you came away because of the love you bore her whom you believed to be your own sister? She still lives, so Jim writes, but her health is sadly suffering. How could you leave so good a home?

"But come, lads, cheer up. My tale has brought about a queer state of things. Bring on the ale, boys; let's drink to his health, and the little girl he left behind. The mail goes out in the morning; write to her and give her fresh life."

"That's so, Ned," said another, slapping him on the back; "I always thought you the luckiest fellow of the crowd. You think nothing of panning out a couple of ounces a day; and, now if old Dave's yarn be true, ye have a Countess for a mother, with a castle on the Rhine, and a fair-haired maid dying of love for ye! 'Taint no small luck you're born to."

The ale was brought, and though all drank to his health, never a drop passed Frank's lips. He had made a vow with himself never to taste it, since he had learned the danger of loving it too well, and sitting apart from the others while they sipped and passed away the time, he poured out his heart upon paper to those he had once resolved never again to see. He would be with them by Christmas time, he wrote. The letter was sealed and sent. Before it reached its destination old Dave had another letter from Jim. "Too late," sighed he, as he read on; "Madge died on Thanksgiving day." Frank never went home.

Correspondence.

LETTER FROM NEVADA COUNTY.

BY CARRIE F. YOUNG.

Ed. Agriculturist: The early rains have washed the dust from the foliage and the mist from eyes and brain. With the cool mornings ambition revives, and we remember our promise to the Agriculturist. This 13th day of November, in Nevada City, California, we plucked from the vines

RIPE STRAWBERRIES,

Large and luscious. Since October 1st *nine* pounds have been picked from the same vines. About fifty hills bore autumn fruit. The owners do not know the name nor where they originated. The fruit is dark-colored, long, and rich-flavored; the same plant bearing both long and short stems. They have been set three years; are cultivated by hand in hills. The soil is decomposed or rotten granite, very adhesive and compact; the yield of fruit so large it is not best to tell it. Red clover, sweet corn, apples, plums, peaches, pears, do full as well on this soil, but root crops cannot be as successfully grown. Water from springs is abundant all through the dryest seasons. We do not mean for a hundred, but for one, two, five or ten acres. The choice little homes are usually made on the remnants of old

WORKED OUT MINING CLAIMS.

Sometimes an acre of rocks can be covered with the "tailings" of a mill or a placer mine. The owner of the rocks hurriedly levels off as much as he can; then at the lowest end of his acre piles up brush and gravel, to confine the stream until the precious cement—clay, sand or small rock—can settle. After a few weeks the rocks are covered. In from one to two years the new soil is ready for spade or plow. The yield of vegetables, blackberries or clover is sometimes worth more in a single year then all the gold obtained by the original owners.

Some of these old-time miners, after their visions of gold vanished like the "baseless fabric" of dreams, have gathered enough cash to go home and return again with the girls they left in '49 or '52. These thrifty Yankee girls, by their economical habits and industry, are worth more financially than the best placer mine. The reason is obvious, is it not? The mine gave rich promise, but little gold. Years passed away. The promises were not fulfilled; the cabin was cold and cobwebby; bushels of sacks and torn garments accumulated; youth and vigorous early manhood were fading; old dreams and young hopes mocked and taunted the disappointed toilers. Very few, in comparison with the whole number who ought, have the courage to challenge the old sweethearts to share their poverty. We are acquainted in the mountains with several who did. The challenge was accepted. "Ah!" said the glad husband of six years, "poverty is nothing with such a wife as I have!" "Seek ye first the Kingdom of Heaven," we thought. After all they were not poor. The thrifty Yankee girl suggested clover and cows. The debris was caught, soil formed, clover sown, cows bought, good stalls provided, and

GILT-EDGED BUTTER

Is the product all the year, worth a

dollar a roll. Trees were planted, old ones grafted; tons of red apples command two cents a pound at the door. Poultry receives some attention, at remunerative prices. Strawberries bring twenty cents a pound at home. These and several other small (of themselves) resources make the money. The porches have vines; the windows that most beautiful drapery, growing plants. Fuchias and geraniums and heliotrope adorn the walks. A perfect wilderness of blossoming beauty and fragrance where once was only a dishwater mudhole!

Hundreds of worked-out mining claims are awaiting the dilligent hands of

HOME BUILDERS.

Even the crevices, where neither plow nor cultivator can go, will receive and perfect a peach tree or a grapevine. Peaches of a pound each are not unusual. The raisin grape yields bountifully. We have a cluster of Flame Tokay of three pounds weight. Bartlett pears, as fine as ever grew, by wagon-loads have rotted; not for lack of market, but of the co-operative industry to properly put into market.

Hoping all your readers may find blessed companionship, and thus be able to make happy homes, we send MERRY CHRISTMAS AND HAPPY NEW YEAR GREETINGS.

LETTER FROM KERN COUNTY.

THE FROST

Has caught us rather early this Fall, coming about the first of November, cutting down potatoes, squashes and corn which we expected would have two or three more weeks to perfect in, judging from last year's experience, as then crops of the kind kept growing until well into December. We have had .4 of an inch of rain, but do not depend upon rain for a crop. We shall plow and sow when ready,

DEPENDING UPON IRRIGATION

If it is needed. Some of our land produced fine crops of corn and potatoes this season from the seepage that came from irrigated farms above. There is a great change taking place on this island in this respect. Since new ditches have been made, on some of the farms where they had to dig twelve feet deep before coming to water, it now stands within three feet of the surface, and some think they will have to underdrain. Still there were many crops lost this season. The water supply was not reliable, because the ditches were new and unsettled. Such has been the trouble up about the middle of the island.

BIRDS, RATS AND RABBITS.

Down nearer the lake, where so much irrigation was not needed, the blackbirds on the corn and tule rats on the wheat crop discouraged some. Then another trouble that we all have felt is the rabbit pest. They not only destroy trees and vegetables, using up melons and pumpkins at a rapid rate, but barley and alfalfa falls in no small quantity before them. Their natural enemy, the Coyote, having passed away before the advance of civilization, the rabbits are left to increase and multiply and devour the products of the soil. But I think their day will soon be over, for

A MANIA FOR HOUNDS

Has spread among the farmers, and a half dozen of them on each section of land would soon "absorb" the rabbit supply, and, from what I have heard and seen, I have no doubt it will pay a farmer well to buy them at $5 each. Who can supply them at that price? How would it pay to raise them?

Showing the influence of

ELEVATION ON CLIMATE,

While fig trees all around on the flat lands were cut by frost, one tree planted on a sand ridge only five feet higher, stands untouched. And no ice has been there, though a thin scale has been formed on lower land on every side. As so many set out

LIVE POSTS

Late in the Spring, and fail to make them grow, I will take this opportunity to suggest if they will cut the posts in this month, even if they have to lay on the ground until Spring before they are planted, they will probably do better than such as are cut after the sap begins to start on warm days in February. Let any one try it, and I think they will plant their posts in the Fall instead of Spring after this. Adieu for the present.

Yours, ISAAC B. RUMFORD.

November 13th, 1876.

Educational.

The Smack in School.

BY WILLIAM PITT PALMER.

A district school, not far away,
'Mid Berkshire hills, one winter's day
Was humming with its wonted noise
With three-score mingled girls and boys;
Some few upon their task intent,
But more on furtive mischief bent;
The while the master's downward look
Was fastened on a copy book;
When suddenly, behind his back,
Rose sharp and clear a rousing smack!
As 'twere a battery of blues
Let off in one tremendous kiss!
"What's that?" the startled master cries;
"That, thir," a little imp replies,
"Wath William Willith, if you pleathe—
I saw him kith Thuthannah Peathe!"
With frowu to make a statue thrill,
The master thunders out, "Hither, Will!"
Like wretch o'ertaken in his track,
With stolen chattels on his back,
Will hung his head in fear and shame,
And to the awful presence came—
A great, green, bashful simpleton,
The butt of all good-natured fun—
With smile suppressed, and bitch upraised,
The threatner faltered—"I'm amazed
That you, my biggest pupil, should
Be guilty of an act so rude!
Before the whole set school to boot—
What evil genius put you to't?"
"'Twas him, indeed, sir," sobbed the lad,
"I didn't mean to be so bad—
But when Sussunah shook her curls,
And whispered I was fond of girls,
And dursn't kiss a baby's doll,
I couldn't stand it, sir, at all,
But up and kissed her on the spot!
I know—boo hoo—I ought to not,
But, somehow, from her looks—boo hoo—
I thought she kind o' wished me to?"

SELF-SUPPORTING EDUCATION.

ONE of our lady correspondents, calling our attention to the great amount of suffering among our young men and women out of employment, asks the following questions:

Is our educational system doing anything to enable our young people to grow into self-supporting citizens? Surely something beside Normal schools should be necessary to receive all our youths of both sexes who have a right to clamor for the privilege of becoming a successful artisan. The land is swarming with teachers, and we are still adding more to the supply. Let us have workshops and teach our boys trades, or make them familiar with the use of tools, so that upon leaving school, or during vacations, they can step into a shop and earn something toward their own support, thereby preventing much suffering. A MOTHER.

The above is full of importance to our educators, and especially to all of us who have children to educate. We are sure that every boy and girl should be learning some practical trade or branch of manual labor while attending school. Let the years of schooling be more, and include the skillful use of tools, and instruction by actual experience in some useful calling. Here are a few ideas which we quote from a report of one of the public school superintendents of Santa Clara County. It has the right ring to it:

"What we shall teach in our public schools seems to be a debatable question. The answer is plain. We should teach those branches actually necessary to fit our boys and girls for the vocations of life. That reading, writing, spelling, grammar, arithmetic, geography and history should be taught is conceded by all. As the importance of a thorough training in these studies and the best methods for accomplishing the same are to be presented to the Institute by competent instructors, I shall devote what few remarks I make to the consideration of other subjects that I consider equally important in a practical education. Our manufactories are becoming very important, and they demand trained help from industrial art schools. We must furnish it, or it will come from Europe and crowd our own illy prepared artisans to the wall. The competition that our mechanics are meeting is becoming more marked and decided every day. To meet their opponents successfully they must have a thorough technical training. The great conflict of the age is an industrial conflict. The time is past when armies will decide the superiority of nations. We must look for some other arbiter, and we find it in the industrial arts. The great contest of future ages will be fought and won at International Expositions. The different nations of the earth are preparing for the contest. Reports show that there is but one opinion on the subject of the necessity of an industrial training. All Europe has begun to move in the matter. Even now we are far behind in this particular, and it behooves us to act, and that quickly, too, in our own defense. The reasons for such an education are many and important. Our present system does not meet the wants of the times. The proof of this statement is the large number of young men and women that are growing up among us without any aim in life. This condition of affairs arises from many parents being prevented by their silly pride from giving their children any industrial training whatever, and from there being no means provided for a technical education even when desired. If our children are failures in life we have no one to blame but ourselves. Their education unfits them for any calling; hence they follow none. Children must be taught to work. Labor is their only salvation! The boy who becomes a merchant, a mechanic or a farmer, fills just as honorable a position in life as he who turns his attention to medicine, to law, to letters, or to theology. All labor is equally honorable! And the sooner we realize this fact in the education of our children the fewer tears will we have to shed over their failures and disgraces. The question, "what shall we do with our boys?" need not trouble the public mind. If we give them the proper education they will take care of themselves."

Keeping Boys on the Farm.

Among the many questions for parents to ponder now are: How shall we train our children? What vocation shall they be educated to follow? What is best for them and us, and society generally? Some of the people leave their children floating, ready to take any direction chance may happen to give. It is certainly a very important matter to consider these questions, so as to act exactly right from a realizing sense of responsibility, and with an enlightened forecast. In regard to one of the many avocations, in a late discussion an intelligent farmer gave his views as to the importance of improving the estimate and outlook of farming, so as to make it more attractive and interesting to boys and young men; and we think there is much weight in what he says:

"I consider this the most interesting subject that can be discussed; interesting to us as individuals, and interesting to us as a community. The society of our town depends upon the action of our young men—whether they are taught to love the farm. From whence has come the stability of our whole country? From the young men who are raised in the country. How are we to interest the boys? How are they to be held upon the farm? One step in that direction is for the farmer to honor and have a greater respect himself for the business in which he is engaged. Every one believes his business is the worst, and it is seldom that children follow the business of their parents because they hear it spoken so disparagingly of. So, if the farmer is talking of poverty, etc., will the boy be likely to follow the farm? No; then speak respectfully of the occupation and teach the boy to honor it. The position that farming occupies in relation to other professions with regard to making money, prevents young men from desiring to follow farming. They look upon the city clerks and see them well dressed and apparently in the enjoyment of ease, and when they contrast this with the patched, soiled clothes which they are obliged to wear, perfumed as they are from the cow stable, with a scarcity of spending money, notwithstanding hard labor, it renders them discontented and encourages desires to flee from the farm to more congenial pursuits. There is one advantage in farming, that in that occupation the man is comparatively independent. Seed time, harvest and the increase follow each other in due course, and the uncertainties of trade and liabilities of loss do not disturb his slumbers, and so long as the soil is productive, he is sure of his daily bread. Boys should not be overworked, for in that they get the impression that farming is a sort of perpetual slavery."

Says Dr. J. G. Holland:

"If the American farmer wishes to keep his children near him, he must learn the difference between living and getting a living; and we mistake him and his grade of culture altogether if he does not stop over this statement and wonder what we mean by it. To get a living, to make money, to become 'fore-handed'—this is the whole of life to agricultural multitudes, discouraging in their number to contemplate. To them there is no difference between living and getting a living. Their whole lives consist in getting a living; and when their families come back to them from their schooling, and find that really this is the only pursuit that has any recognition under the paternal roof, they must go away. The boys push to the centres or the cities, and the girls follow them if they can. A young man or a young woman, raised to where either can apprehend the difference between living and getting a living, can never be satisfied with the latter alone. Either the farmer's children must be kept ignorant, or provision must

be made for their social wants. Brains and heart need food and clothing as well as bodies; and those who have learned to recognize brains and hearts as the best and most important part of their personal possessions, will go where they can find the ministry they need."

Brain Farming.

The time is coming when the elementary principles of agriculture will be taught in our public schools. The time is coming when the sons of our farmers, who are sent to institutions of learning to obtain a respectable education, will pay less attention to learning the Greek and Latin languages, and the higher mathematics, and more attention to studying such authors as Liebig, Johnson, Silliman, Agassiz, &c. The learned professions are all filled to overflowing. Half of the members cannot make a living. What is now wanted is, education to fit men for farming—to make the profession of farming as honorable, as reputable, as any other. If the members of the agricultural profession are as well educated and as well qualified, there is no reason why they should not fill important positions—which are now almost completely absorbed by the learned professions, as they are termed. It is true there is not much progress in this direction, but there is some. Let there be more. Let farmers be as well educated for their profession as other members are for their special professions. Farming will then become more profitable. Brain farming is increasing yearly. By and bye we hope there will be no other, and that it will be educated brain at that.—*Ex.*

Educated Farmers.

Just in proportion to the successful cultivation of the soil, is the aggregate prosperity of the human family augmented. As agriculture is the foundation of all success in every department of business, how important then that it should be studied and understood by those engaged therein! It was the first vocation to which man was called by the voice of his Maker, to till the soil, and it is yet the highest and noblest profession on earth among men. It is not only above all others, but it underlies and sustains all others, and all others acknowledge their dependence upon it.

Brains and muscle should share equally all laborious occupations. But the brain should direct the muscle and utilize and economize its power.

Culture of Sugar Cane.

A writer in the Florida *Agriculturist* estimates the cost of seed for an acre of sugar cane at $15. The machinery for manufacturing on a moderate scale will cost probably about $200, but the industrious poor man can plant a smaller area until he raises his own seed, and the income from his first acre manufactured and sold will pay for all necessary machinery. A market is always at hand, and an article as staple as sugar or syrup can never fail to be in demand at remunerative prices. At the present time more than the ordinary inducements are offered for engaging in this business. Cuba, which has furnished no small portion of the sugar consumed in America, is now so demoralized by domestic troubles, that for some years at least she will be wholly unable to furnish the usual quantity, and the market value must necessarily be increased. To raise an acre of corn in the State of Illinois requires a greater annual expenditure of capital and labor than to raise an acre of cane in Florida. It has to be planted every spring, and cultivated throughout the greater part of the summer, while cane, once planted, grows for years, and needs but little cultivation after the first season. A successful crop of corn gives a yield of about 40 bushels per acre, and an average home price of 50 cents per bushel is usually quite satisfactory to the producer. If, therefore, the Illinois farmer can become rich raising corn at $20 per acre, why cannot the cane grower in Florida progress much more rapidly, when his crop requires no greater average expense, and yields from $200 to $300, instead of $20 per acre?

There are portions of California where sugar cane might be produced, we believe, at a profit. We would like to see such of our farmers as can well do so, try the experiment on a small scale, at least, for the sake of knowing how it will grow on their farms.

Stock Breeder.

Suggestions About Breeding.

A PERFECT development and sound, vigorous health, constitutionally, especially in the generative organs, are conditions of fertility.

2. In the maintenance and improvement of breed, the truth that "like produces like," that the reproductive germ will stamp upon the animal developed from it the characters of the parent organism, is the backbone of success.

3. We can, in a great degree, at will, produce variations and improvements in breeds, as by abundant feeding, a mild and salubrious climate, a rich and healthy soil, moderate use, education, stimulation, or selection of desirable qualities; by disease or rejection of undesirable characters and properties; by soliciting the weight of imagination in our favor; by allowing the breeding animals to mix only with those of the stamp desired; by crossing less improved breeds systematically with mates of a better race, and by crossing animals faulty or deficient in some particular point with others in which this point is developed in excess.

4. The herding of pregnant high class animals with low bred ones, and the resulting attachment between the two races are to be especially avoided, as occasionally affecting the progeny injuriously; strong impressions from a new or unusual condition of surrounding objects are to be equally guarded against.

5. If a valuable female is allowed to breed to an inferior male, she cannot be relied upon to produce pure bred animals for several succeeding pregnancies. Through a strong and retained impression, the absorption into the system of living particles (germinal matter) from the fœtus, or through some influence during pregnancy on the ova, then being most actively developed, the good or bad features of the first sire are perpetuated in the progeny of succeeding ones.

6. All breeds show a tendency to "breed back," or to produce offspring bearing the marks of their less improved and comparatively valueless ancestors; hence, individuals of this kind must be rejected from the best breeds if we would maintain their excellence.

7. Certain races and individuals have their characters more fixed, and will transmit and perpetuate them in greater proportion than others with which they may be crossed. If their qualities are desirable, they prove highly valuable in raising stock of greater excellence.

If undesirable they will depreciate the value of any stock crossed for many generations. That fixity of type, however, is, above all, a characteristic of those which have been carefully selected and bred up to a certain standard for many generations, so that in our best, longest established and most esteemed breeds we have a most valuable legacy left us by the successful breeders of the past with which we may mould our inferior races almost at will.

8. While breeding continuously from the nearest relations tends to a weakened constitution, and the aggravation of any taint in the blood to sterility, these may be avoided by infusing at intervals fresh blood of the same family which has been bred apart from this branch of it for several generations. Moreover, the highest excellence is sometimes attained only by breeding very close for a time.

9. Diseased or mutilated animals are generally to be discarded from breeding. Mutilations resulting from disease existing during pregnancy, and disease with a constitutional morbid taint are above all to be dreaded as transmissible. —Prof. James Law, in *New York Herald.*

Household Reading.

AN EARLY MORNING SOLILOQUY

Mrs. S. Talks and Thinks to Herself.

BY MRS. LIZZIE WRIGHT.

"This is very much like savage life," Mrs. S—— said to herself between two puffs at the obstinate fire; "when will I learn to look out for myself. It is just as mother used to tell me, exactly." Mrs. S—— was thinking now, fussing with the fire meanwhile, putting the half burnt slivers together, and herding up the dim coals, but it would not burn, so she took up an old pan and run out into the shed, half dressed as she was, to pick up chips. The shed was open, and the winter wind made her shiver.

It is strange how much one can think over in a brief space. She saw while hastily scratching up the chips, a picture of herself away back in the old home, making the fire one cold morning, while her mother's voice from the curtained bed at the other end of the room was saying, "why don't you lie abed till some of the men folks make the fire. I see this is the way you will always do." Then she had answered in perfect trust, "no, indeed, if ever I'm married, and have a house of my own, the morning fires will go unmade all day if they wait for me to make them." "How is it now," she went on talking and thinking to herself while putting her chips on the fire, "there are two fires to make this morning, and I, alas! am making them both, while he is in bed. Why haven't I common sense enough to know that men will take what ease they can get. Oh, why am I not wiser. I am not fit to do such rough work, and yet I keep on doing it because nobody else will do it for me. I have about come to the conclusion that I shall be allowed to do it as long as I can. These are hard thoughts, but I can't help them. I shall keep them to myself, certainly I should be extremely mortified to have those things known. I can only tell it all over to myself to free my mind. If wives did not come so easily," she soliloquized, "these farming men would be more careful of those they have. I wish I could legislate on this subject for them. 'Oh,' they say, exultingly, "'tis hard, surely, to find a hired girl, but if you say *wife*, a dozen women are ready to bind themselves unconditionally.' Oh, I can't help confessing to myself, with bitterness, that there is truth in what my mother used to tell me. 'If you work yourself to death you will never get "thank you" for it.' I feel just now like laying this down as an axiom: 'the harder a wife works the less he husband loves her.'"

"And why should he not love her less? To be sure it may be to save expense, and to make himself and children more comfortable, that she overtaxes and burdens herself. She may rise early on Monday morning, make fires, get breakfast, and have her wash water over before her husband is ready to get up—do it all under silent protest, too, because it must be done and it is so much better to have it all done early and out of the way, for the comfort of the family, and to give time for the sewing and knitting. But in making fires she blackens and burns her hands, may be, and in washing the skin is rubbed off and the joints spread. They are all soaked up and reddened, and after a period of excessive hard work they cease to be pretty, and her husband knows it. She may dress herself neatly when her task is done, and have on her face that pleasant look which the consciousness of a hard job completed tends to give; but she is tired, worn, and jaded; she cannot be bright, joyous, and vivacious; and, unless she has an uncommon amount of spirit and independence, a few years of this round of work drags her down, until her husband is *thought* comes to regard her as *'the old woman.'*"

"There are so many things she can do to save expense; house-cleaning and papering, and even whitewashing, and blacking the stoves, and all the sewing, *of course*, that she can hardly bring the week's work within the week; seldom finding time for those artistic arrangements of dress and hair which all admire, whatever they may say; and husband, unconsciously perhaps, draws contrast between her and the lively, sprightly beings he meets here and there, who are not worn down with work and care, because they have mothers to look out for them, while, alas, in too many cases, the wife of the farmer has no one to aid or council her."

"It vexes one to hear women, as a class, talked to as though they did nothing. Does a woman who rears a family of children do nothing? This wide country is covered with farmer's homes. Some of the wives are strong and hearty, able to walk under their burdens; nevertheless it would be fearful to count up the farmer's wives who are literally *worked to death!* Some, who have no ambition beyond the round of housework, may live, and thrive; but the finely organized woman, who has delicate taste and inherent strivings after better things, must look to herself or she will wear rapidly away under the farming regime. Why is this so with farming more than with other business?"

"But the saddest is the matter-of-course way in which the husband views it all. It is a matter of course that his wife should do all she can; that she should be constantly at work, never finding time for recreation. A matter of course that she should grow weaker and weaker, less and less efficient, and should finally leave him free again. It is not often that the husband of the woman who has worked herself to death is guilty of repining long for her loss. The

great march of events must go right on the same as ever, as though nothing had happened, and a fresh helpmeet is soon installed. The poor children! Oh, well, to be sure, in all the wide world they can have but one mother!"

"But now to this day's work—I must hurry to get it done before I am too tired." The fire was burning nicely now. Mrs. S— had been thinking and talking, while warming her fingers and lacing her shoes, so there had been no time lost. Her journal of to-night will show whether she finished her day's work without getting too tired.

SATURDAY EVENING REVERY---NO. 3.

BY M. E. T.

Close application and late hours enabled me to finish my new suit—ruffles, bands, buttons and bows, all complete, and in due time for the contemplated visit. And now, before attempting to gather up the tangled threads of discourse, permit me to say that I have had a very pleasant visit indeed. I spent a night at the hospitable home of our Editor and his amiable wife, Mrs. H., a lady of high mental culture. In her I have had the rare pleasure of seeing a woman who possesses the moral courage to practice after the counsels of her better judgment. We had quite a *tete-a-tete*, from which I drew both pleasure and profit. Among congenial natures there is a soul-stirring element that lifts us to a higher plane of existence. We rise for a time, as it were, above the quagmire of pretense and folly, and reach out, longing to plant our feet more firmly. But the elements conflict. Temptation, like some tempest tossed wave, overtakes us, and we fall again into foolish frivolities. Nobody pities us—at least very few. This lack of sympathy is the very subject I meant to ponder in my evening's revery, as one of the unpleasant consequences arising from our improper mode of living.

Did you never think how little love and sympathy we get as a class? The wealthy condemn and despise us for attempting to compete with them; while those below us on the ladder of life entertain opinions, as many as there are rounds. Some are jealous, some are envious, and some bemean us; but nobody pities us. Surely, poverty and respectability combined make for us the roughest road of all in the great human ladder.

[Against the *better judgment* and request of Mrs. H., the editor allows the above deserved compliment to his wife from friend M. E. T. to appear. And we will here take occasion to put in a word as to M. E. T.'s sentiments about poverty and respectability. While we sympathize with and pity, we cannot participate in the sentiment. We claim to know what poverty means, and to be respectable, but positively have no desire for the society of persons who allow their wealth to become a bar between us. To gain wealth for the privilege of such society, is happily no part of our ambition. It seems to us that it must lower any person in his own estimation to even care for such.

There is a plane on which congenial spirits can meet—the plane of honest frankness. The artificial life framed in accord with conventional customs of aristocratic pride, is in conflict with Americanized social ideas, and contrary to ennobling feelings and to common sense.

Money surely gives great power. It can build palaces and command armies. But the man who is respectable and rich might be as respectable and poor. In manly and womanly independence, moral principles, intelligence, determined character, the love of justice and of doing good, together with all the traits that add grace, kindness and affectionate sympathy to the soul, there is much to respect and to love. The rich do not monopolize these virtues. The "poor and respectable" may possess them and other desirable qualities in a high degree. The wealthy mostly covet their possessions of money, and depend rather upon the homage paid their wealth, and with these rest satisfied.

True and perfect friendship depends not upon wealth, pretense nor pride. It it is unostentatious and unassuming. It lives not upon dress-trimmings nor outward show. By the law of congeniality it springs from the hearts desires, and grows through mutual, reciprocated, upreaching thoughts, feelings sentiments, souls.

One real friend is worth a world of riches;—a million worlds of hollow hearts. A few choice friends, and such as care for each other's society, for the mutual benefits and enjoyments, are enough. The whole human family is as much ours as anybody's, but it is only such as choose us and such as we choose that we care for as special friends, companions or associates.

It is worth being "poor and respectable" to know our real friends. Poverty may be an inconvenience, narrowing our powers, comforts and enjoyments oppressively. But after all it is a trifling evil, born of man's selfishness and greed, and borne by others as deserving as any of us. Let us see that our pride makes us not envious, and that our desires are in harmony with the better promptings of our natures.—ED. AGRICULTURIST.

HOME MUSINGS.

Greeting from the Redwoods.

BY M. E. O. W.

Every month that the AGRICULTURIST has been laid on the study table, in its tasty, neat dress, we've wanted to write and say how very much we thought of it. But cares and sickness have prevented. Why could we not have been made so as to go "all at once, and nothing first," as the Deacon's "One Hoss Shay" did.

It's such jolly fun to go here and there and everywhere, do lots of work, have much done, a clean house, yard and garden. It's such a comfort that everything unsightly has been removed, and we can sit down contented. The *paying up for the overdoing* is the part we don't like.

Here it is November, with its frosty nights and sunny days. The bright leaves on the forest trees and vines speak of the near Winter—such beautiful Winters as California has! If humanity would only look for and accept the lovely *little things*, as they come along to make our lives noble and good, what a world of perfect pleasure this Earth would be.

This morning the old adage came up, that 'twas "better *late* than never." The study looked so inviting, with its fresh flowers and cheerful wood fire,—who wouldn't write?

How many times have we thought of the little mother, "propped up with pillows," and "the dear baby face" nestled so close to the warm loving heart. We have pictured the sweet home, away off somewhere—where we shall never find it, only in the AGRICULTURIST — of two strong, faithful hearts, giving glad welcome to the little stranger. The pleasant castles we have built for the wee nestling, (in mercy may they never tumble about his ears,) of when he shall have grown for twenty-one bright Summers—does not chew or smoke tobacco, nor drink any of the vile compounds made for humanity's ruin, and can express in gentle language all pure thoughts, with no room in the noble mind for any other; can think that a woman is as good as a man, therefore should be equal, and love the little mother so tenderly true. Will it not bring balm for that "aching body," and a happiness into that "every-day sameness of life," to which we are *all* more or less bound by circumstances?

It seems to me that no gift can equal the boon of motherhood, if one can only keep the treasures loaned, even but for a little time. It is better than to count eight grass-grown graves, and know that the little footsteps will never, *never* gather round the cheerful fireside. To know that ones hair is getting thin and gray—that one's eyes are getting blinded. Soon there will be no more glad songs filling the home with their echoes; no willing, busy feet, waiting willingly our every call; no sweet voice calling, "Mama, see here," and "Mama, see there," as the pleasant things of home life come and go. Shall we then sit down and in weariness wait? No. The wounded, bleeding mother heart must shut away its pain, work cheerfully on until the harvest is finished and the gleaners called home.

We cannot *quit* without asking the usual number of questions, and sometimes they don't get answered, too! Is it really cheating to make everybody believe that we're the happiest woman alive? To fill our home with books, music, flowers and song? To make it a place of glad welcome to all who enter its blessed portals? Though sometimes chidings must be given, if a mind is found to be uncultivated, or pernicious habits are being formed. It must not be cheating to make others happy, though one's own heart is bursting with cruel disappointment, and it certainly brings a comfort that brooding never could.

The next question is

ABOUT MY ROSES.

For two years they have been visited with two fearful plagues. The first and worst are little beetles, with gauzy wings folded under their brick-red backs, with which they fly; the head, legs and *bill* are jet black. The beetles bore into the buds, and they wither and fall off. We have tried many things, but nothing works satisfactorily except the hands and very carefully, too, for at the least noise the beetles turn over on their backs and slide off, and they are not to be found, even by diligent search. The other trouble is something like fungus, that draws up the leaves, blasts the buds, and though the plant lives, it is no longer a "thing of beauty." We like roses so very much, and have had to work so hard for them, that we cannot willingly give them up without at least one more effort to save them. We have three varieties of

FLEUR DE LIS,

Blue, purple, and buff. This year, for the first time, they have been infested with a long black beetle that ate buds and flowers alike. The beetles looked very much like what the children called snapping bugs, in the days when we were young. Big or little bugs are disagreeable, at least in one's flowers. Is there not some way to get rid of them?

Are

ASPARAGUS PLANTS

Advertised for sale in California? We have looked long and carefully and found none. We dug a large bed, trenching two and a half feet deep, filling in with well made compost, and lots of salt, according to Burr's work on "Field and Garden Vegetables," and sent East for plants. They came all right, and were nice looking. They were planted, but only a few came up. We would like to know where we could get a few of "Conover's Colossal" plants to fill out the bed with. Of all nice things in a kitchen garden, asparagus is the crowning glory. It takes a good while to get it started, but when once done it comes so early, does not mind the cold weather, and grows so much food on a little piece of ground. It is good in every way it can be cooked—never tried it raw—but our favorite dish is to cut the shoots or tender part into little pieces, and boil until thoroughly cooked, then thicken with a little flour, season with salt, butter and pepper, and turn on nicely browned toast. "It is good."

GRANDFATHER'S LETTERS---NO. 10.

Events of the Last Century.

INGLEWOOD'S LAST LETTER BEFORE MARRIAGE.

To Aunt Mary, Ma, and Angie:—Now that you have opened a correspondence, and coincide with me in thinking it better, in some cases, to give expression to our sentiments by writing than *viva voce*, I have the assurance this will be kindly received. From our interviews I have heard that the trio, Aunt Mary, dear Ma, and the darling Angie, are all in favor of matrimony, provided it be well and suitably accomplished; exactly the sentiments of Inglewood. So pray allow his name to be added to the list, and may it ever be a happy quartette. Angie's objections I do not consider at. Thank Ma for coming to my assistance. She knew how time passes, what a long period five years seems while yet in our teens, what a short when we get into the busy, active scenes of middle life. Though no advocate for the disparity of ages, how often in our passags through life does our choice lie between two evils; or, rather, between two things, neither so good as might be wished. Were it in my power to bring to Angie what I now have to offer, and in addition, years only equal to or a little over her own, how gladly would I do it. But as my age is twice hers that is impossible, and I must look, and ask the darling Angie to look with me, over the case as it is. The advantages of this seniority are in having this home and homestead, with its appurtennces, free of debt, which I could not have had at an earlier period. It has cost years of toil and self denial. You, dearest Angie, have had opportunities of knowing the habits I have formed: now established by the growth of years; exempt from the danger of relapsing into evil ones. Another advantage is the longer experience and greater observation I can bring to our mutual advantage than could have been done at an earlier period. In the compauionship I am seeking, you know it is not only a wife in the ordinary acceptation of that term, but for a helpmeet for all the deyartments of our nature; the physical and intellectual, the moral and spiritual. The last two, I shall be ever ready to think the supremacy rests with the feminine. The two former, with the masculine. But all there must be mutual counsel, confidence, advice and prayer. Then with the love principle ever kept aglow, you will find Inglewood more thoughtful of the welfare and happiness of the darling Angie than of his own. Such, dear Ma and Angie, are some more of the sentiments of your old and true lover,

INGLEWOOD.

Boys and Girls.

What Little Tot Does.

Monday I take my little tub,
And fill with soap and water;
And my dollies' clothes I rub, rub, rub,
Ma calls me her good daughter.

Tuesday I heat my tiny iron,
And smooth my dollies' dresses;
Dress them up nicely in clean clothes,
And comb their silken tresses.

On Wednesday mamma cuts some work
And I sew it neat and tidy,
And mamma comes and kisses me
And says I'm a little lady.

Thursday I to the kitchen go,
Help mamma do the baking;
And bread or cakes, or pies or tarts,
I make what she is making.

Friday I give my dolls a feast,
Then take them all out walking;
You'd laugh to hear the funny things
They say when they are talking.

Saturday we have a merry time,
Some game or merry frolic,
Unless a dolly is taken sick
With toothache or the colic.

Sunday I read some little book
Until the bells are ringing,
With mamma go to church and hear
The sermon and the singing.
—[Rural New-Yorker.

The Caged Mouse.

I'm only a poor little mouse, ma'am!
I live in the wall of your house, ma'am!
With a fragment of cheese, and a very few peas,
I was having a little carouse, ma'am!

No mischief at all I intend, ma'am!
I hope you will act as my friend, ma'am!
If my life you should take, many hearts it would break,
And the trouble would be without end, ma'am!

My wife lives in there in the crack, ma'am!
She's waiting for me to come back, ma'am!
She hoped I might find a bit of a rind,
For the children their dinner do lack, ma'am!

'Tis hard living their in the wall, ma'am!
For plaster and mortar will pall, ma'am!
On the minds of the young, and when especially hungry,
By, upon their poor father they'll fall, ma'am!

I never was given to strife, ma'am!
(Don't look at that terrible knife, ma'am!)
The noise overheard that disturbs you in bed,
'Tis the rats, I will venture my life, ma'am!

In your eyes I see mercy, I'm sure ma'am!
Oh, there's no need to open the door, ma'am!
I'll slip through the crack, and I'll never come back,
Oh, I'll NEVER come back any more, ma'am!
—[Laura E. Richards, St. Nicholas.

OUR CORNER.

HERE WE ARE, with Our Corner stuffed full of letters and contributions. There is so much that Aunt Polly wants to say, that she hardly knows what to write.

At this holiday season of the year, everybodies' hearts are full of good feelings. Some are thinking what to do to make others happy, while others are planning and guessing what they can have to be happy themselves. Of course those who try to make others happy will themselves be happiest, because they doubly enjoy. Those who think only of self generally have a very mean self to satisfy, and are likely to be cross and dissatisfied, no matter who makes them presents.

But all the readers of "Our Corner" are going to do something to surprise somebody, something to make somebody happy!

Perhaps we may be too poor to make rich presents, the most of us, but we can all be able to give some trifle, the work of our own hands, if ever so simple, that will be equally as acceptable as the offerings of the rich, because coming from our hearts as well as our hands. We can all do some little acts of kindness to show our regard for those we love and for those who need and can appreciate our regards.

Aunt Polly cannot take you all by the hand, really, but as your eyes glance at these pages you can imagine how she would like to do so, and how she will think of you all, hoping you will be as good and happy as you can be.

A MERRY CHRISTMAS

From Aunt Polly. The new year will soon be here. Now let every one of our circle write something to "Our Corner," that we may have a Happy New Year altogether!

Of course you all enjoyed Thanksgiving. Aunt Polly did, and so did the little ones around her. Read Nell Van's Thanksgiving story. It really belonged to our corner, but the naughty editor put it in another part of the paper. But its just as good for all that.

And now for our bushel of letters. In the first place, here is what Lulu says about

LINDA AND HER PETS.

"I promised to tell you more about our little girl and her pets, when I wrote abont her 'Orphan Asylum.' First, I will tell you what happened to the chick. One night Linda had tucked him up warm in his chip bed, for the night, when her big sister (not knowing him to be there) set a heavy basin of water on the poor little chick, and, after a short sickness his eventful life was over. Next day there was a grand funeral. All the relations and friends were invited to attend the ceremonies, after which he was laid in his last bed under the lilac bush. There he will enrich the ground, and bloom out in great purple clusters of flowers, or make beautiful green leaves.

Linda has a new pet now, that engages her whole attention. It is a young dog which she calls "Queen." She is very playful, and follows her mistress all around, like the little 'dorg' Johnnie had. Did you ever hear about him? I will tell you one verse:

Johnnie had a little 'derg,'
His hair was black as jet,
And everywhere that Johnnie went,
That 'purp' went too, you bet!

A little white-headed boy used to like to recite that when I went to school in your town, Aunt Polly. Linda's dog likes to go with her to the spring for water, but she has to watch him or he puts his nose in the bucket, and then she has to go all the way back for more! He has one bad habit. He will chase the chickens, but we hope to break him of that soon. It is amusing to hear Linda try to scold him. She says (trying to be cross): 'Have you been after chickens, you naughty dog?' Then, in another minute, she calls, 'Here, Queen!' and off they go, bound for a race through the clover fields. Sometime, I will write you something more. Perhaps—oh well, you'll find out when the time comes!" LULU.

MILPITAS, Oct. 29, 1867.

DEAR AUNT POLLY:—In my last letter I sent you any answers I could guess to the puzzles. I do hope no one will guess my two puzzles, as I am very anxious to get the premium. I do not know which of the puzzles to call best; they so fairly puzzled me that I was more than satisfied with them. Is there any particular age over which we cannot get your premiums. I am fourteen. I hope I am not too old, for I certainly am very small. Your Neice, TILLIE.

ABOUT THE PUZZLES AND CHROMOS.

Aunt Polly requests her nephews and neices who have sent puzzles which have not been answered, to write and say in which number of the paper they appeared, and also to say which of the four chromos, "Romeo and Juliet," "Waiting at the Well," "The Birds," or "The Chick," they desire to have as premiums for puzzles not answered. She has so many cares upon her just now that she can hardly keep track of them all. Also if any one entitled to a chromo has not received it, please write at once, and it shall be attended to.

CANDY FOR CHRISTMAS AND NEW YEARS.

DEAR AUNT POLLY:—I was sorry to hear that there was sickness in your family, and equally so to miss the good letters from our bright circle of children, that is widening each month, showing that they are gaining interest in "Our Corner." That 's right, keep on writing, and do please tell us what Santa Claus gives each one of you. That would be a splendid entertainment, to hear how each child spent Christmas. And right here, remember that each of you must make one other child happy in some way, if you would truly enjoy your own presents and blessings. Your old toys would be new to other children, and very acceptable, if they are poor, and have nothing better given them. But I want to tell you about a good lady I know, who lives near me on Ninth street, next to the Quaker church, who is making the nicest, sweetest, purest candy you ever tasted of; it is made of pure sugar, colored and flavored with perfectly harmless articles. She has Centennial rock; fruit cream, that melts in your mouth; chocolate cream; chewing candy—and such a variety—that you will want some of all kinds. Only forty cents for a whole pound! Santa Claus should be sure to fill his bags, as it contains nothing harmful to make children sick. Remember the place, Ninth street between St. James and St. John, next to the Quaker meeting house. Mrs. G. G. Chase is the lady's name Yours,
JEWELL.

AN UNREASONABLY SMART BOY.

NATIVIDAD, Oct. 18, 1876.

DEAR AUNT POLLY:—I see that you have published the little piece that Joseph Riordan sent up, so I will send you a few lines, as it is recess now.

Natividad aint a very large town, but it contains a very smart boy, who, without looking at any book can tell you all about it, and what's in it also. His name, Charley Bates, A. M. He is very unreasonable smart. He is now studying on examination for the next teachers' examination in Salinas City. By the way he is only 13 years old. How is that for Natividad? Some people think the reason he is so smart is that he has never had his hair cut since he was born. It almost touches his heels. Yours, &c.,
HARRY & GEORGE.

A FIRST LETTER.

RIO VISTA, Sept. 28, 1876.

DEAR AUNT POLLY:—This is the first time that I have written to you. I am only ten years old, so you cannot expect great things of me. I have been to school six months this Summer, and studied, reading writing, grammar, geography, arithmetic and sentence-building. I have commenced to make out some of the puzzles in the AGRICULTURIST, and think they are very interesting. Here is a puzzle that I assisted in composing:

I am composed of 23 letters.

My 4, 10, 13, 18, 8, 6, is a kind of melon.

My 6, 3, 16, 23, 11, 23, is a Western State.

My 21, 5, 16, 12, 7, 4, 5, 13, 22, 12, is an American peninsula.

My 17, 21, 13, 14, 19, 3, 18, is a whole number.

My 9, 8, 15, 20, is a famous bridge.

My 19, 12, 1, 2, was the home of Goliah.

My whole is rich in silver.
FANNY BARKWAY.

ANOTHER FIRST LETTER.

HILL'S FERRY, Oct. 9, 1876.

DEAR AUNT POLLY:—Here is a puzzle I send to the AGRICULTURIST, if you think it worth publishing. I am twelve years old, and it is my very first attempt at such a thing. I don't know whether it is correct or not, as I had no help in composing it. If you think this is worth putting in your paper, I will try and do better next time.

I remain as ever your little neice.
FANNIE B.

THE PUZZLE.

My first is in bird but not in bee.
My second is in flower but not in tree.
My third is in weak but not in strong.
My fourth is in blade, but not in prong.
My fifth is in bad but not in good.
My whole is in some kind of food.

AND ANOTHER ONE.

SARATOGA, Nov. 12, 1876.

DEAR AUNT POLLY:—I am a little girl eleven years old. I live in the mountains near Saratoga, and uncle takes the AGRICULTURIST. I often read the letters in "Our Corner," and thought I would write a letter to Aunt Polly, and hope it will be well received. I am learning to ride on horseback, which is very necessary for us who live in the mountains, for in Winter the roads are so bad we cannot go in any other manner. We have just received the AGRICULTURIST. I am sorry there was no "Corner," and that Aunt Polly had sickness in the family. This is my first attempt to write for a paper. Will try to do better next time. MAUD C.

AND STILL ANOTHER.

SALINAS VALLEY, Monterey Co., Cal., September, 1876.

DEAR AUNT POLLY:—I live in Salinas Valley, near Salinas City. I have three sisters and one brother. Mama takes the AGRICULTURIST. Good by.
ANNIE WILLIAMS.

P. S.—I forgot to tell you how old I am. I am ten years old.

Here is a letter, a puzzle and some poetry, from a neice who promises to be a poet one of these days. Aunt Polly thinks she is real smart for one so young:

DEAR AUNT POLLY:—I thought I would write you a small letter. I am 10 years old. My father takes the AGRICULTURIST, and I like it very much. I could not make out the puzzles, or I would have written before. I will send you a small puzzle and some pieces of poetry that I have made all myself. If it is not too much work will not you please correct the mistakes in my work. I wish to join the consins in Our Corner, and be your neice. Here is my

PUZZLE.

Y. R. X. St. Ream
L. Y. 876
543
1419

MY LITTLE SISTER.

I have a pretty little sister
With eyes of a very bright blue,
The color of her hair is auburn,
And her cheeks of a delicate hue.

Now is it not a great pity
We can find her no pretty name?

The names were all so pretty
Before little sister came.

My sister's a little darling,
She is so sweet and good,
And she looks so very cunning
When she has on her little hood.

For anything in this world
I'd not part with little sister;
One day she was away,
And oh! how much I missed her.

After much hunting, we have found a name. It is ROSE, the queen of the Posie. We are all happy when sister is near.

LITTLE BABIES.

Little babes are the pride of the households,
Always laughing sway care:
See their eyes are bright as sunshine,
And their little face so fair.

Every one should have a birdling,
To creep or trip about the floor,
And every morning see a bright face
Peeping at the chamber door.

Dear Aunt Polly, I suppose this will fill up Our Corner, so I guess this will be enough for this time.

Your Neice,
YETTA FELDMAN,
San Jose.

Aunt Polly has some more poetry of Yetta's, but will save it for another time.

Here is a square puzzle, for curious ones to find out:

WOOD
JOHN
MASS.

It is said that this letter found its way through the mails to its proper destination and owner.

Hygienic.

HOW I DRESS MY BABY.

BY "JEWELL"

IN the first place, warmth being the life of young infants, I keep one or two coverings of flannel over the entire surface of the body, excepting, of course, head and hands. The shirt I make high necked, long sleeved, and long enough to cover the bowels, to the thighs, opened down the front, and buttoned, which I find most convenient to put on and take off. A flannel waist with buttons around the lower part, on which I fasten a flannel and white skirt, over which is a white slip, long sleeved and high necked. The stockings I have of white woolen, which reach up to the diaper, above the knee, and if I cannot buy such I make them out of old stocking legs. Over these I have white cotton ones, which I fasten to narrow elastic straps at the side, which in turn fasten to the waist by a loop, the buttons being on the elastic. When baby was in long clothes I omitted the white stockings and shoes.

In this way the child is kept warm, the clothing equally distributed over the body, and perfectly comfortable, and the whole body is loosely yet warmly dressed; four very essential points towards the health of children. Also, the simple way of making and putting on and off greatly helps us overworked mothers.

At night I put on two flannel nightdresses, one not being warm enough—nothing else, but the diaper, which, by the way, I have of heavy flannel for the night, as it keeps warm when wet, and is not so disagreeable to the child to sleep in.

This idea of toughening our children by half dressing, I don't believe in. The very people who talk it are either hot blooded, or warmly clad themselves. My experience is that in toughening children by careless dressing and feeding, only the naturally tough ones live. The delicate are sure to die in the process, and many a delicate, frail little baby, by judicious dressing and feeding, have made robust men and women.

I must say a word about the flannel band that most infants wear the first six or eight months of their lives. After the first month I put them aside forever, because my warm flannel shirt and waist keep baby's bowels perfectly warm, and I claim that no child needs bandaging *anywhere* to keep it in shape, as most people seem to think. Give children loose, warm clothing, to grow in, and they will repay your care by growing lusty, fat and active limbed. Should any desire patterns of my baby's shirt and waist, I should be most happy to supply them.

Domestic.

FAMILIAR TALKS---No. 14.

BY SNIP.

OH, these Editors! Wasn't it the height of impudence to make my receipt for mince-pies utterly unintelligible, and then ask me how I liked Thanksgiving and Christmas "pi." I had always heard that editors were very meek and submissive, and endure everything without talking back, but I don't believe it any more. Well, I will try it over again, and hope for better success. Here is the receipt I attempted to give to the readers of the AGRICULTURIST last month. One pound finely chopped beef—roasted or boiled; three pounds of apples, chopped; one pound of raisins; one-fourth pound of currants; one nutmeg; two tablespoonfuls of ground cinnamon; one tablespspnful of ground cloves; the grated rinds and the juice of two lemons; one pound of sugar; moisten with sweet cider. Let it seand all night. When using add two ounces of citron, cut in very thin strips. The original receipt calls for half a pound of suet, but if this is used another pound of apples will have to be added, and the pies will need to be served hot.

I see mention made of moss frames in the November AGRICULTURIST. Our little girl has just finished one that looks very neat and quite pretty. We sometimes find whole trees covered with moss suitable for such purposes. The moss does not vary much in color, but some of it is nearly as fine as the most delicate seaweed, and again it is more like lichens. If one can get diffrent colored mosses, I think such frames could be made very attractive. Not long since I saw, at a friend's, a small box painted green placed upon a stool, and set by the window, and filled with plants. I liked the appearance of it very much, but I thought I could improve the looks a little. So with aid from a friend I have a piece of rustic work that elicits praise from all who see it. The supports for the box are made of manzanite. The limbs of this tree grow in such varied shapes, and the bark is red and so smooth, that it only requires to be cut in the woods and nailed together. The box is of a size suitable for the window, and about a foot deep, and covered with twigs of moss, or, rather, with twigs of trees covered with moss. These twigs are fastened on with tacks and twine. I have Colisium, or Kenilworth ivy planted around the edge of the box, which will soon droop over the moss. This ivy is a delicate plant, and is suitable for hanging baskets and rockeries. One silver fern, two golden ferns, a violet root and a Calla lily are all I have in the box at present. I intend to try and make a smilax run over the legs of the stand,—there being some twelve or thirteen of said legs. I am a little doubtful about it, however, as the smilax will be obliged to grow without much light. I will report in the future.

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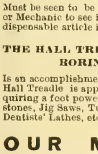

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1877

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Vol. 8--No. 1. | SAN JOSE AND SAN FRANCISCO, CAL., JANUARY, 1877. | SUBSCRIPTION PRICE, $1.50 a Year. Single Copies, 15 Cents.

ANCIENT AND MODERN AGRICULTURE.

BY JOHN CHAMBERLAIN.

The history of agriculture is pre-eminently an interesting and instructive study, since upon this great industry the prosperity of society has mainly rested from the remotest times.

From evidence furnished by the antiquarian and geologist we conclude that man in his primitive state lived by the chase, and with his rude stone weapons disputed the dominion of the earth with monstrous beasts.

We know very little concerning the vast period of time which elapsed between that and the hieroglyphical age, for science, the great magician, has not yet succeeded in opening this charmed volume of the world's history, and the origin of agriculture is therefore unknown. At the earliest dates of which we have any information, transmitted by pen, or chisel and hammer, agriculture was already in an advanced and flourishing state. As far as we know it had its origin in the valleys of the Nile, Euphrates and Tigris, which were probaly densely populated more than a thousand years before Joseph became Pharoah's minister of agriculture. Upon the ancient tombs and monuments of Egypt inscriptions and paintings, apparently as distinct as ever, represent rural scenes not unlike modern ones. Villas are depicted, surrounded by cultivated gardens and fields, irrigated by means of canals and reservoirs. Laborers are seen plowing with oxen, others harrowing, while others make the surface of the field smooth and compact with rollers. We judge from these inscriptions that the Egyptians had as complete and intelligent a system of agriculture, under the dynasty of Merus, 5000 years ago, as they possess to-day; nor is the fact true of the Egyptians only, for good authorities aver that no material improvement over the ancient methods and processes was made until about the beginning of the 18th century. When Egypt was a province of the Roman Empire, she sent twenty million bushels of wheat to Rome annually. Pliny mentions that thirty-four stalks were grown from one seed in Mycias and sent to the Emperor Nero. Speaking of the soil, the same author remarks that when dry it was so stiff it could not be plowed by the strongest oxen; but when softened by rain he had seen it opened by a wretchd ass on the one side and an old woman on the other.

Agriculture was not esteemed a very honorable pursuit by the dominant classes of the ancient Greeks, and was chiefly carried on by the lower orders, who were descended from the original proprietors of the soil.

The Romans on the contrary were an agricultural people, and Roman noblemen, scholars, philosophers and poets, delighted in agricultural pursuits and rural pastimes. Distinguished Roman families took the names of favorite plants or cereals, as the Sentuli, Fabii, etc. Wherever the Romans extended their conquests they introduced their excellent system of agriculture, traces of which can now be seen in nearly every country in Europe, and, indeed, in southern Italy, agriculture if anything has degenerated since the days when Virgil and Varro wrote and sang of all the husbandman's toils and pleasures, and the bounty of Ceres. But the Romans degenerated. Latterly the chief supplies sent to Rome from her provinces were the product of slave labor, the more powerful patrician families having seized in many instances, and acquired by fraud in others, the provincial lands which they worked with slaves.

The free husbandman, deprived of his few acres allotted to him under the law, became a mere retainer or dependent of his powerful landlord. The agrarian laws designed to prevent or break up such an unjust monopoly became a dead letter; and thus by injustice, fraud and violence an easy way was prepared for the vandal and barbarian. The free husbandman had no longer any interest in a state or government which could not or would not secure him his rights. Robbed at once of his lands and independence, his patriotism had neither soil nor nourishment, and died; for the home of patriotism is not in the political club, nor cabinet, nor legislature, but by the firesides of freemen. After the barbarians overran Europe agriculture rapidly declined, and with one exception did not begin to recover until about the 17th century. The exception was in the case of Spain after her subjugation by the Saracen, who established an extensive system of irrigation, and so developed the agricultural resources of Spain that her annual revenues were raised to thirty million dollars, a sum, says Gibbon, which in the 10th century probably surpassed the united revenues of all the christian monarchs of Europe. We can easily judge of the backward state of agriculture in England, even as late as the 17th century, from the fact that up to that time what are now common vegetables were imported to supply the royal table.

The first English book on agriculture was published in 1523, by Fitzherbert, and entitled the "Boke of Husbandrie." It was followed by "Five Hundred Points in Good Husbandrie," in doggerel verse, and after that by the "Whole Art of Husbandrie," by Barnaby Googe. Says a good authority, "The experiments and writings of Jethro Tull in the early part of the 18th century are among the first important attempts in real progress in modern agriculture." Tull invented the horse hoe and drill husbandry in England, also the threshing machine, according to some authorities.

Tull was followed by Arthur Young, to whom the world is greatly indebted for the spread of agricultural knowledge. He was born in 1741. He travelled extensively and observed closely, and established among other facts the value of common salt as a manure, besides making valuable experiments to ascertain the effect of the sun's rays on soil. The most important movement, however, in favor of agriculture, about that time, took place in 1793, by the organization of the Board of Agriculture in England. Encouraged by this body, Sir Humphrey Davey began his celebrated investigations. He showed how plants, soils and manures could be analized, and manures selected which would furnish the elements, and made experiments with ammonia, specimens of guano, etc.

The ancient implements of agriculture among the Greeks, Egyptians and Romans were the harrow, hoe, roller, plow, etc.

A plow similar to the modern one was used in Greece one thousand years B. C. In Egypt the shadoof and Persian wheel have been used in agriculture for five thousand years. During the last half century agriculture has advanced to the rank of a science. Chemistry tells us how to select and renew soils, steam plows tear up the prairie and plain, and steam is employed to thresh our annual millions of bushels, while labor-saving machines are multiplying so rapidly that the name "field laborer" may become a misnomer.

"If it doesn't rain,"—Well, what then? It begins to look serious, as we go to press. No rain yet to do any good, to start grain or nourish its growth.

For the last two years we predicted dry seasons, but got wet ones. We made the prediction on the ground that, according to records, about once in a decade there are two or three dry seasons in succession. Look at 1862, '63, and '64. Since then we have had very good seasons, and may expect a heavy dose of dry when the dry seasons do come again.

As we insisted last fall that farmers should hold their wheat for 2 cts. before selling, we now say: hold on to your wheat at any price, if you can afford to. Don't sell it till you know whether it will rain enough to bring another crop. If it doesn't you will do a nice thing to hold, for it will all be needed at home. If it does rain it will still be worth a fair price, as it cannot lower in price much before another crop is harvested.

If it doesn't rain to bring a crop, summer fallow every acre of land that you can. Get rid of all surplus stock, sell or kill the animals of least value, and save the best young stock and best breeders only. Husband your straw and hay carefully. The wise farmer has two or three years' straw stacked and on hand, to carry his stock through a dry season.

Prepare to irrigate with windmills and engines, and cultivate a small place anyhow, so such products as will grow the most needed food to the acre. It is time to begin to prepare for the worst, although the best may be hoped for.

Now one piece of advice in which we are specially interested. Whether it is wet or dry, renew your subscriptions to the CALIFORNIA AGRICULTURIST, and we promise to give you such a fund of valuable information on all most needed points as will pay you ten times over. We are interested in making the AGRICULTURIST an indispensable companion and reference book for the farmer, gardener, orchardist, stock grower, poultry raiser, and family, wet or dry, and especially "if it doesn't rain."

Numerous Enquiries are made about the young man, Hamilton, who once canvassed for the CAL. AGRICULTURIST, and who has later published the *Journal of Education*, in San Jose. He is a first class bilk. He defrauded the publishers of the AGRICULTURIST out of between $30 and $40, and we believe that he started his *Journal of Education* on purpose to defraud the people. Many who have paid subscriptions have not received a paper. Rowell's *Newspaper Reporter* announces its suspension. Hamilton's real name is said to be O'Grady. We advise our readers to have nothing to do with him.

The Spirited Center Piece, in first page of cover, engraved by our special artist, is characteristic of the times. It illustrates at once the work of the season, the sort of a team that is the most profitable for farmers to raise and use, and that the agriculturist of the present day has an easier time with his modern gang, where he can ride and direct the work, than the old-time plowman at his plowtail. Contrast that picture with this, and be thankful that you live in an age of mechanical as well as agricultural improvement.

A Grand Barbacue was given last month at Berryessa district, four miles east of San Jose, by the settlers: a rejoicing over the final defeat of a bogus Mexican land claim that had been hanging over them for many many years. There were many homes of settlers in dispute now rendered peaceful by a just decision of the Supreme Court. Half a million dollars worth of real estate was involved, in a tract reaching from the summit of the mountains east to the river limiting the city lands. We were there and feasted with the good people on the occasion, and rejoiced with them with a joyful heart.

Pumpkin Flour.—The Alden Fruit Drying Co., of San Jose, have this season made a quantity of pumpkin flour. The pumkin or squash is first dried and then ground fine. This preparation is certainly very excellent for pies, puddings, mixing with bread, and for kitchen use in many ways. Try it once and you will want more.

Wheat Cuiture. in a dry season, should be adapted to the necessities of the occasion. Thin sowing, not over 50 pounds to the acre, and very thorough surface tillage, should be the rule.

Errata.—In our article on orcharding last month the peach called "George 4th" should read "George's Cling."

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AND
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EDITORIAL NOTES.

Mr. A. Clock, of St. Helena, Napa county, has been notified that he was awarded the first premium for California hops, at the Centennial Exposition.

Late Plums.—Mr. G. W. Tarleton of San Jose, shipped 40 boxes of Coe's Late Red plums East the first week in November. They were packed without wrapping, simply in layers between paper. Some boxes of them were opened on Thanksgiving day and found to be sound and fresh as when packed from the trees, without a sign of decay or defect.

Shipping Pears.—Within the last two years there has been more of a demand than supply for late-keeping pears to ship East. The Winter Nellis and Buerre Easter are most in demand. The consequence is, that our nurserymen have had a run on them for all their pear trees by parties setting out new pear orchards to raise fruit for the Eastern markets.

This month we have devoted much space to forest and to grape culture, as being seasonable topics, requiring a good deal of attention. These have pressed out several Departments, which may be expected in future numbers with regularity. We propose to make our City Gardening Department, this year, as attractive as it was last. Also to make poultry and pet stock something of a specialty, while all departments, for IN DOORS AND OUT, will be as complete as our space will admit.

ORCHARDING.

Questions and Answers.

POMONA, LOS ANGELES CO., Nov. 22, 1876.

EDITOR AGRICULTURIST:—Availing myself of your invitation in your November number, which accidentally fell into my hands, I desire to consult you as to the "best fruits for an orchard" in Southern California. I will state my case as briefly as possible. I am a novice, and know nothing about the management of fruit trees, or farming; have twelve acres of deep gravelly loam, irrigating facilities; land irregularly worked for twenty years by native Californians, but excellent for all kinds of fruit; four acres in cultivation with orange, lime, and northern trees, alfalfa and raisin grapes, leaving eight acres to be set out in nothern fruits this season. To begin wrong would cause a failure, and prove fatal, and I would thank you sincerely for your advice on the following points: 1st—Proper preparation of the soil, how deep to be plowed, etc.; in barley this Spring. 2d—Best varieties of Winter apples, suitable to this climate. Earliest peaches and pears, and the proper proportion to be planted. 3d—Proper distances, and as to the advisability of planting peach trees between apples with a view of getting them down when the apple trees come in full bearing. As to distance there is a great difference of opinion, in fact I have not found two opinions that were not conflicting on any point relating to fruit culture; some advise 20 to 25 feet apart, while the school brings it down to 20 and 18 feet for apple—to shade the ground. 4th—Proper manner of setting out, arrangement of roots, depth, &c. 5th—Orchard clean, or in grass—and what kind. 6th—The best time for planting. 7th—The value of small fruits as compared with large, where the market is distant. 8th—Best and earliest varieties of black-and raspberries, and where obtainable. 9th—Information as to true Muscatel and Zante grape vines, where obtainable. 10th—Muscat, Muscat of Alexandria, Muscatel and Malaga—these terms are confounded, what is the difference? 11th—The most extensive and reliable nursery of choice fruits in California, or the East if shipment is preferable. 12th—Anything that may suggest itself to you. I would extend my inquiries still further, but have already presented so much, and the only apology I can offer is that of a beginner who is anxious to avoid mistakes, and get and counsel of men of experience. But as the majority of settlers in this section find themselves in the same predicament, information on the subjects referred to is of general interest and value. Lastly, Is there any publication treating practically on fruit culture in California?

Very Respectfully Yours,

CHAS. WEILE.

Answers to several of the questions asked by our correspondent will be found in our article on orcharding in the December number. We will, however, give such advice as we are able, in the order in which the questions are presented:

1. The soil should be thoroughly pulverized to a depth of four to six inches at least, if not already in that condition.

2. We refer you to our list of apples given last month. Your climate may require a little different selection, but we think not. The list of peaches we gave last month is suitable for San Jose. The earliest peach is Briggs' New Red May—which originated at Marysville in this State, and is ahead of any other. The earliest pears are Dearborn's Seedling, Madaline, Buerre Gifford, Bloodgood. These are valued principally because they are early. The first really valuable early pear is the Bartlett.

3. We are satisfied that 18 to 20 feet is far enough apart to plant your trees, not so much to shade the ground, though that is well enough, as to best economize the land and produce the most good fruit to the acre. Plant all trees equally distant, to facilitate cultivation. To be sure some trees will bear closer planting than others, but a general average should be decided upon. We do not advise mixing the different sorts of trees together, though there is no reason why they will not do very well that way. You will find it handier to get at your fruit to have all different kinds and varieties by themselves.

4. The manner of setting out trees was given last month.

5. Never allow grass, grain or weeds of any kind to grow in your orchard, whether you irrigate or not, and particularly if you do not irrigate. Nothing will sooner ruin an orchard than to grow grass or grain in it. The surface soil should be kept light, clear of weeds, and be manured every two or three years at least, if you want to produce fine, large, high-priced fruit. When irrigation can be resorted to, low, hoed crops may be cultivated between the rows two or three years; but allow no corn, grain, nor grass, to grow in your orchard.

6. The best time, is as soon as the rains wet the soil enough to make it handle nicely, and the frosts have caused the leaves of the trees to begin to fall. Early planting in California, for all deciduous trees is best.

7. The value of small fruits as compared with large, where the market is distant is not much, particularly if you depend upon shipping it green. Do not think of shipping perishable fruits a long distance to market in competition with the same produced nearer the same market.

8. Our market fruit gardeners produce the Wilson, Kittatinny, and Lawton blackberries, and the Falstaff, Knevitt's Giant and Red Antwerp raspberries.

9. We must advise you to enter into communication with some of the leading raisin growers. Will any subscriber who has cuttings for sale, true to name, please answer?

10. We think there is "a distinction without a difference" between several of the muscat family of grapes. Some reference to them can be seen under the Vineyard Department in this issue of the AGRICULTURIST.

11 We cannot advice the purchase of trees from the East. Our California nurseries can produce better trees for orchard planting. If you were going into the nursery business, it might be well to get quantities of small stock and seedlings from Eastern nurseries for a starter, but for an orchard, take California grown trees by all means, and buy them too of RELIABLE nurserymen—not agents or tree peddlers. This is our advice all the time. There are several very reliable nurserymen who have extensive nurseries in this State. At the risk of showing favoritism, we will mention John Rock, of San Jose, as one of that sort. We know him to be reliable.

12 As to hints, we cannot claim to know all about your special locality, as to what varieties of fruits are best adapted to your climate and to your market. Each locality must determine these things for itself. Were we going into orcharding in your locality, we would take the precaution to go to every intelligent orchardist there and get their special opinions, and reasons, on these points, take notes, and by comparison, determine as well as we could what varieties are best, etc. Then you must take into consideration that the building of railroads will produce new markets, and require a different class of fruits for profit from your local market. The new road finished last year connecting you with San Francisco, Sacramento, and the East, must change things in these particulars. A road opened across the southern plains to the East, will open another new market, and you will do well to consider this fact also. We will say that our best shipping fruits from this point (San Jose) are Winter pears and best keeping plums and prunes. There is also a demand for a portion of the grape crop—select table grapes—at paying figures.

No book on fruit culture in California has yet been written. Fruit growers are just beginning to accumulate reliable data for such a work, in their experience. It would be an easier matter to write up their mistakes than to frame out a really reliable work for fruit growers' guidance in California to-day.

The information we gave last month contains more reliable matter, from practical experience, than any other one article ever published on this Coast

RED SPIDER.

left—Can you tell me how to rid house plants of a small, red insect, very destructive, and not larger than the point of a pin? I had a beautiful and a very thrifty rose, that I brought indoors when the winter weather came; I soon noticed a change, but supposed it resulted from an indoor atmosphere. The leaves withered, and one by one the tiny buds dropped off. One day a friend called my attention to the insects, which I had not noticed. They were numerous on the few remaining leaves, and a web like that of a spider enveloped the bush. I removed the plant from among others, as a means of prevention; but in case of trouble again would like to know how to destroy the pests without injury to the plant.

SETTING MILK.

24—Does it make any difference with milk in regard to the cream rising, whether pans are covered or not? Once lived in the country and made butter and cheese; but never thought to notice such things. I now have the milk from one good cow to manage, and have noticed on several occasions that when I covered the pans I did not get nearly so much cream as when left uncovered. I mean close covers, such as a naughty rat that loved cream would compel one to use. Have I just discovered what others may have known for ages, or has anybody else thought anything about it?

M. E. T.

1. The insect our correspondent refers to is the red spider. It is a very annoying pest, and is getting to be very plentiful and troublesome in California, on many kinds of plants, in doors and out. Tobacco smoke will kill them, also a soap suds and cayenne pepper. Fumigation with tobacco or sulphur is the resort for their destruction by gardeners when they infest plants in green houses.

2. It is a well known fact that cream will raise better in open vessels in a well ventilated room, than in close rooms, or in covered vessels. The milk should be exposed to the air, always, until the animal heat is entirely out of it, and the peculiar smell of new milk has evaporated. After that the cream will raise very well if the pans are covered, but the cream will be softer and more oily than if left exposed to the air, will not seem to be as thick as it really is. Exposed to the air, the evaporation from the surface toughens the cream and makes it appear thick. Exposure to a pure atmosphere is quite necessary to the formation of a thick, rich and sweet cream, devoid of all taint or disagreeable odor and taste. If you cover from rats, first allow the milk to get thoroughly cold and to lose the animal odor.

The scholarly article on our first page this month is by our business agent, Mr. John Chamberlain, who has taken the field this year to travel over the State in the interest of this journal. We trust that, with the aid of our friends everywhere, he will be able to contribute such reports from different sections as will make the AGRICULTURIST at once attractive and valuable to readers at home and abroad.

The Editor has been somewhat remiss in his duties during the last month, owing to the severe illness of his baby, who came near dying with diptheria. He felt it a first duty to try to save him, even if he neglected everything else, and lost subscribers. For days and nights his unremitting attention was required, while letters accumulated and went unanswered. The baby's life has been spared, only because it was under the treatment of a mother who had knowledge of the disease, and of how to treat the child intelligently for it. He was not dosed with medicines, but Nature was aided in resisting the disease and restoring the baby to its normal, healthy condition, in a rational, common sense manner.

Next month, JEWELL will tell mothers how she treated the disease, if nothing prevents.

THE RURAL NEW YORKER, one of the leading agricultural papers is as progressive and enterprising as ever. It is a splendid paper to have in the family. Terms, $2.50 a year. Rural Publishing Co., 78 Duane Street, New York.

Poetry.

[For the Cal, Agriculturist.]

Florida to California.

BY MINNIE B. BIZER.

BRIGHT land of the sunset, my heart turns to thee,
Sweetest home of the orange and vine!
Thy fame hath been wafted in fragrance to me,
Like an incense from some hallowed shrine;
I have breathed the sweet breath of thy bridal blooms
When not many days plucked from the bough,
And dreamed that I stood in a valley where looms
The tall mountain with snow-covered brow.

While yet in the Northland, where winter's chill breath
Blights the labors of Nature's kind hand,
I read of thy shores, where no annual death
Spreads its gloom, like a pall, o'er the land,—
And longed so to dwell in some beautiful vale,
Basking there between mountain and wave,
In a home where the breath of blooms on the gale
Is the sweetest that earth ever gave.

Since then to this far away Southland I came,
In vain search of a climate like thine,—
A winter I've passed, and a summer of flame,
While King Sol in his vengeance did shine;
In this famed "Land of Flowers" more than a year
I have watched and I've waited to see
What allurement it claims to hold the heart here,
And in what its attraction can be.

'Tis not like the beautiful land of the West,
With its broad, fertile acres of mould,
Where all sowing seed on the dark earth are blest
With a crop yielding riches untold;
The health-beaming eye and the rose-tinted cheek
But few natives here ever may claim,—
Nor light-springing step, for the frame is too weak—
What is health here is only a name.

Then may the kind Fates bear me yet to thy shore,
Where the soft, fragrant air, like a balm,
Can to beauty and health the feeble restore,
While in orange grove singing its psalm;
For gale of the mountain, or breeze of the sea,
Or sweet zephyr of vale, 'tis as pure
As Eden's first breath, when from evil yet free,
And full many earth-ills it can cure.

Sweet land of the sunset! my hearts's only home,
Still I visit thee oft in my dreams,
And through thy fair vales, and o'er mountains, I roam,
And rejoice by thy musical streams;
Clime of climes! land of lands! no other below,
Can to me seem so dear, and so fair,—
To others farewell, when to thee I can go,
For I feel that my life-work is there.

WILBORN, FLA., Nov. 20, 1876.

For the California Agriculturist.

Falling of the Leaves.

BY J. BELL.

How silently they fall, without a sound
Save a faint rustle, as they one by one
In swift succession strew the frosty ground,
Mingling their colors in the morning sun,

And far and wide what beauty they unfold,
The forests glowing in their autumn dress,
Their pathways carpeted in green and gold!
Spread to our view a scene of loveliness.

We watched their coming in the early Spring,
We saw their freshness in the Summer's prime,
When 'neath their shade the feathered tribes would sing,
Now, changed and withered by the hand of time.

The falling leaves are whispering "death is nigh,
All earthly objects perish or decay."
This solemn warning brings a pensive sigh,
Knowing that we too, soon must pass away.

But glorious thought! we perish not as these,
The mortal dies, the immortal lives again,
"Dust unto dust"—the Spirit upward flees,
To heavenly joys, where death can never reign.

Our Father's sovereign care is ever all!
Each little plant, or strong aspiring tree,
Is watched and tended—not a leaf durst fall
Unnumbered or unknown, O God to thee!

Then, let me pass away, 'ere Winter's gloom,
Enfolds the earth within his icy shroud,
In Nature's freshness, while the flowers still bloom,
And heaven invites to rest—undimmed by cloud!

San Jose, 1876.

In the Woods.

How changed the scene from that I lately sang,
Of sunshine in the woods!
When all the leafy coverts rang,
Down to the deepest solitudes,
With sweet bird harmonies of song
From the wild-feathered throng.
But now the furious wind's sonorous bass
Sounds through the naked trees;
Musing spreads forth her wing
And in the air float melodies, which chase
Each other as they please
And gaunbol as in ecstasies;
Each tree a harp, and every branch a string,
Touched by a hand unseen, now low, now high,
Outringing rapturous refrains,
And with great heaven's own minstrelsy
Flooding the hills and plains.
Some tremulous leaves still hand upon the boughs,
Quivering 'twixt life and death,
And yonder willow sways, and sighs and bows
Before the frost hath breathed her wintry breath,
And the last leaf falls flickering to its tomb—
Relic of brightness and of bloom.
Walk through the wood, thrilled to the utmost core.
By the wild concert of celestial sounds
In God's cathedral. Hear the wondrous roar
Of nature's organ, echoing in rounds
From the high headland to the ocean shore,
Magnificently grand!
This is God's minster-choir,
By the blue heavens o'erspanned.
And now the song bursts forth the harp and lyre,
A hallelujah chorus loud,
A hurricane of sound which sweeps
Triumphant from cloud to cloud,
As though the very heavens were bowed;
And then in silence sleeps,
Sweet silence! like the cadence of a psalm:
The storm was sudden, and the hallowing calm
A sudden as the storm;
Not a breath stirs, and zephyrs soft as balm
Brings peace in its most lovely form.
Only the whispering rill I hear,
With its mild vesper hymn the trees among,
And, beautifully clear,
The robin's plaintiff song.

After the Storm.

After the storm, a calm;
After the bruise, a balm;
For the ill brings good, is the Lord's own time,
And the sigh becomes a psalm.

After the drought, the dew;
After the cloud, the blue;
From the sky will smile, in the sun's good time,
And the earth grow glad and new.

Bloom is the heir of blight,
Dawn is the child of night,
And the rolling change of the busy world
Bids the wrong yield back the right.

Under the font of ill
Many a cup doth fill,
And the patient lip, though it drinketh oft,
Finds only the bitter still.

Truth seemed oft to sleep,
Blessings flow to reap,
Till the hours of waiting are weary to bear,
And the courage is hard to keep.

Nevertheless, I know
Out of the dark must grow,
Sooner or later, whatever is fair,
Since the heavens have willed it so.

Be Sure You're Right, Then Go Ahead.

Adopt this beautiful motto—
Write it in letters of gold;
'Tis a saying uttered in wisdom,
Applies to the young and the old.
'Twill help us along in life's journey;
Nothing like starting aright;
Such action is pleasing to others
And fills us with inward delight.

Who can compute all the trouble,
The error, disasters and woe,
That occur from neglect of this duty?
Their number but few of us know.
Think and reflect before acting,
Weigh well the project in view;
Be sure of righteous decision
On whate'er you wish to pursue.

Those who've adopted this motto
Seldom have cause to regret,
It saves us a deal of misfortune,
Relieves us from worry and fret.
We jog along easy and happy,
On a wide and definite plan.
Assured of success in our labor,
By doing the best that we can.

The Harvest Land.

The daylight waning and the darkness near;
So little done, and still so much to do!
Before me the long night of cloud and fear,
Without one star to pierce the shadows through.

I hear the rumbling of the swaggering wains;
I hear the burden of the harvest song;
And, through the hazy light in happy lanes,
I see the sun-browned reapers pass along.

And I must lay my sickle down and go
From the dim fields that look so drear and lone;
Alas! that I have so few sheaves to show!
I shall not hear the Master say "Well done!"

With what regret I look back to the past,
When the long shadows loomed so far away;
And Morning seemed on every wakening blast,
To waft the whispers of an endless day!

So many misspent moments, wasted hours,
Playing with pebbles on the sea-washed strand;
Searching for butterflies, or gathering flowers,
Instead of toiling in the harvest land.

And now the night stole'n on me like a thief,
While yet I dreamt that it was scarcely noon;
Sad that the sunshine is so very brief!
Sad that the shadows fall so very soon!

O for one other hour of God's bright day
In which to work with sinew, heart and will,
Ere yet I leave the fields and pass away
To that mysterious sleep where all is still!

—[William Leighton.

The Threshing Floor.

BY AUGUSTA LARNED.

Come, Jenny, into the barn, dear,
Where Jack slings high the flail;
The golden stalks dance far and near,
The blows fall thick as hail.

So rich the tan upon his cheek,
So firm the graceful lines,
He stands like some inspired athlete,
In Sparta's ancient times.

The flail beats out upon the ground
A song that fills his ears;
"'Tis love that makes the world go round,"
This happy thresher hears.

The sun steals past the old barn door
That frames this upland wide,
And o'er the beams and on the floor
It plays at seek and hide.

The woods are caught in silver streams,
The meads are fresh and fair,
As through the vista of our dreams
Blue mountains rise in air,

And angels seem to walk in bands,
Along yon cloudy pile;
There may we fold our work-worn hands,
And rest within God's smile.

Two gray doves on the ridge-pole sit,
And sun their bosom's pride,
While swallows dart, and dive, and dip
In circles far and wide.

And while clouds pause the barn above
Like seraphs in the air;
For all the powers of peace and love
Surround a happy pair.

The earth is verdant for your sake,
The hills are fair to see;
The cautious echoes will not wake
To breathe love's mystery.

Jack's stout flail on the yellow grain
Will chaunt of home and rest;
The bread that's won to that refrain
Is sweetest to the taste.

And while you stand to knead the bread,
And Jack swings high the flail,
No cloud shall shade your golden head,
The love-light shall not fail.

Come, Jenny, into the barn, dear;
Ah trip your lightsome feet,
Our Jack shall cease the flail to hear,
And list his own heart beat.

The Ideal Farmer—And His Wife.

The American farmer—son of the Sun!
Bronzed with a glow from its glory won;
As the free air it is heaven to inhale,
And strong as the steeds of the prairie gale;
Lord of his castle and broad domain,
The herd his vassals, the flock his train,
And rich in the coin his granaries hoard,
He sits at the head of his bountiful board.
And laughs at the crowded world afar,
Buzzing with ceaseless commercial life.

Behold him at morn! his polished plow
Traces dark lines with its silver prow,
Writing the verse in alluvial mould
The Summer shall print in letters of gold;
And set to the trill of the oriole's tune,
Behold him at rest in the languid noon,
Stretched on the grass and cooled by the breeze,
His kingly pavillion the glittering trees.
Behold him at eve;—the evening his own,
Home joys are his that to few are known;
The rustet is brought from his last year's store,
His fruity-faced children play on the floor,
And her wife, her cheek like orchard bloom
Is the crown, the queen, of the cheerful room.

That mine of riches—that farmer's wife!
How busy and happy and proud her life!
From her pans she "pans out" her rolls of gold,
And her eggs are all nest-eggs of wealth untold;
It tries not her patience to try out her lard,
And her lot, like her bed is seldom hard;
She knits her stockings, but never her brows
Gives the fowls a dressing, but not her spouse.
O! busy and happy and proud the life
The farmer lives, and the farmer's wife.

How We Grow Old.

A broken toy: a task that held away
A yearning child-heart from an hour of play;
A Christmas that no Christmas idols brought;
A tangled lesson, full of tingled thought;
A homesick boy: a senior gowned and wise;
A glimpse of life, when lo! the curtains rise
Fold over fold,
And hangs the picture, like a boundless sea—
The world, all action and reality—
So we grow old.

A wedding, and a tender wife's caress;
A prattling babe the parents' life to bless;
A home of joys and cares in equal part;
A dreary watching with a heavy heart;
And Death a drear angel knocking at the gate,
And Hope and Courage bidding Sorrow wait
Or loose her hold;
A new wands gone, and then a brave return
To where the fires of life triumphant burn—
So we grow old.

A fortune and a gen'rous meed of fame,
Or direful ruin and a tarnished name,
A slipping off of week and month and year,
Faster and faster as the close draws near:
A grief to-day, and with to-morrow's light
A pleasure that transforms the sullen night
From lead to gold;
A chilling Winter of unchanging storm;
A Spring replete with dawns and sunsets warm,
So we grow old.

Old to ourselves, but children yet to be
In the strange cities of eternity.

—[N. Y. Evening Post.

SAYS the Ventura *Signal:* A man in Santa Clara valley, on the Briggs ranch, two yeaas ago bonght $2,000 worth of hogs, and has sold from the increase $12,000 worth and has $8,000 worth of hogs on haud. Another party of the same ranch commenced with fifty hogs and kept a strict account of all the expenses of keeping the hogs, and of all that he had sold during the year. At the end of the year, with what he had sold and stock on hand, he had over three hundred dollars clear of every dollar invested. Who will say this is not a good country for hog raising?

The Vineyard.

GRAPE CULTURE.

GRAPE culture may be looked upon in California as an established industry, as much so as cotton is in the Southern States. There is no question as to the superior size, beauty and excellence of California grapes, and the fine growth and healthfulness of the vines. There is a question as to what varieties to plant, and for what purpose, to insure the greatest profits. This question may be settled in the minds of some, but deserves to be better understood by the masses. It is certain that wine making in California has not, as yet, proved very remunerative, and many thousands of gallons of the wines in casks to-day would not bring as much as the casks are worth, and many holders of wine vineyards are bankrupt, or have their property heavily mortgaged.

There may be some particular varieties of grapes that will, in some special localities, make what is called "choice wines," and readily sell at paying prices. But so far, at least, this has proved the exception. Fine varieties of table grapes grown in favorable localities near easy transportation to markets have invariably paid well, and in many instances have made owners of small vineyards independent. We know of a number of owners of vineyards who have grafted their so-called wire grape vines to table and raisin grapes with satisfactory results. Every season the demand right at home for eating grapes is increasing, and during a season like the present one when the rains have held off, and the season has been prolonged to Christmas, there are hardly enough to supply the demand at reasonable prices.

Shipping fresh grapes East must continue to be a growing business for many years, as under our genial suns we can produce earlier and finer grapes than will grow out of doors in the rainy and uncertain climate east of the Rocky Mountains; but for permanent and reliable profits, the raisin grape, in suitable localities for early maturing and ready curing, must prove the best. The best raisin districts appear to be far enough inland to be beyond the chilly sea air, which tends to retard ripening, and upon deep, fine soils, such as are favorable to the production of large as well as sweet grapes. The very driest and hottest portions of our State will make very sweet grapes, but they are likely to be quite small unless the vines are irrigated. The regions along the coast where the sea air affects them, produce beautiful large grapes, but they lack the sweetness for raisins, and ripen two weeks to two months later. While they are fine for market, and come after the rush from interior vineyards is over, and bring fair prices for the table, they are not as suitable for raisins.

There is a raisin belt, so to speak, occupying a medium climate between the extreme heat of the interior and eastern portions of the Sacramento and San Joaquin valleys, for instance, and the coast counties; a portion of country where the climate is so tempered and softened by a commingling of dry heat and damp sea breezes as to produce large, luscious fruit, and ripen them, and cure them in good season.

The mountain region above the hot valleys and below the snow line, all along the Sierras, and some other ranges of mountains, will prove excellent raisin regions. It would not be difficult for an experienced culturist, who has a fund of observations as data, to determine at once a suitable location for a successful raisin vineyard. We do not pretend that raisins cannot be made in any locality where grapes will grow, but simply that there are localities as to soil and climate naturally best adapted to raisin culture. In sheltered spots near the sea, and by irrigation in dry, hot districts, good raisins can be produced and the business of making them will pay.

To any one desiring to engage in grape culture we unhesitatingly advise the business of raisin growing as the branch that promises the best pay and most permanent prosperity. It has already been made a success, and there is a splendid prospect for it in the future. There is absolutely an unlimited demand for the product, for many years to come, and it is fair to presume that were the present supply met, that an increasing demand would justify doubling it within a few years.

This has been the case with other fruits within our memory and yearly the demand for table use of all nutritious fruits is increasing.

Of all fruits there is none more luscious and nutritious than the grape. It comes nearer being a perfect fruit for the sustenance of man than any other one. Men and animals can live and thrive upon grapes or raisins alone, without other food. It is attractive to the eye, acceptable to the palate, and satisfying to the appetite. Made a good use of it is a real blessing to the world. But where is there a surer stepping stone to woe than the sparkling wine which entices by exhilerating nectar, and its promise of joy, only to deceive and to disappoint, and at last to sting like an adder, leaving a depth of appetite craving for stronger drink which cannot be quenched, but only leads nearer to destruction and death. Were it simply a poison it were better, but it not alone kills, it demoralizes its victim, makes him a demon, to despise himself, hate mankind, and abuse his best and only friends, often with curses and blows. Wine is not a product of growth, but of decay. Alcohol is the product of rottenness, and its touch is pollution.

We do not regret there is so little profit in the wine making and liquor part of the business, and are thankful that the better uses of the grape does pay, both in material prosperity to the whole people and to the producer. Old vineyards can be grafted with raisin and table varieties, and the second year they will bear fine crops of fruit.

It is not a very great job to plant a vineyard in California. No deep digging and handling of the soil is necessary. The land should be laid out in rows, some seven or eight feet apart, both ways. This may be done by furrowing both lines with a plow. Cuttings eighteen inches or two feet long are as good as rooted vines to plant, and where the furrows cross a man with a strong, long-handled spade can remove the earth the depth of the blade below the furrow and put the cutting in slanting, pressing it in firmly, leaving one or two buds above the surface. In a day, two men can easily plant a thousand cuttings in good shape. A stake should be stuck by each plant to show where it is, and to tie the shoot to when it grows. Thorough surface cultivation to keep the surface clean of weeds, and light and loose, will be all that is necessary the first season.

VARIETIES OF RAISIN GRAPES.

The White Muscat of Alexandria is the best raisin grape known. The only objection to it is large seeds and thick skin.

The Muscatel Gordo Blanco, (White Muscatel,) is large sized, with thin skin and small seeds—a good raisin grape, but light bearer.

The White Malaga is also a good raisin grape, nearly the same as, (some say identical with,) the Muscat of Alexandria—has small seeds.

The Uva Larga is a long white grape of the Muscatel family,—good in localities removed from the coast.

The Fiber Zagos is not fit for raisins near the sea coast, but in the hot interior will do fairly, making a small, delicate raisin.

The Cannon Hall Muscat is so near like the White Muscat of Alexandria that it might be taken for it. A large grape, will do well in rich, moist soils, in warm localities.

The Sultana, (seedless raisin,) grape is small, but quite a favorite in choice localities near the coast.

The Zante Currant or Corinth varieties do splendidly in California. The Zante Imported Currants, (so called,) are made from the se. Every vineyard should have a few vines of black and white Corinth grapes. We believe a vineyard devoted exclusively to them would pay well.

Of table varieties the Black Hamburg, Rose Peru, Flame Tokay, and Verdel are excellent and beautiful varieties, and should be planted as leading sorts. Several of the so-called wine grapes are good for table use, but most of them are in some way objectionable.

On rich, dark soils the vines grow much stronger than on light soils, and should be planted farther apart. Also on moist soils, where there is danger of mildewing, the vines should be trained higher than on dry soils, and when in bearing the vines should be allowed to dry out in sun and wind.

GRAPE SUGAR AND SYRUP.

Experiments in making grape syrup and even good sugar, have been quite successful during the last season, and this branch of grape culture promises to be one of considerable importance. Three years ago a five-gallon keg of grape syrup was sent to us from Butte county. It was of good quality, and a sample of it kept good nearly three years, and until used up, exposed during the time to changes of heat and cold.

Bees will fill their hives with a good quality of honey from grapes that have been picked by birds and broken into by yellow jackets, but they are powerless to injure whole fruit. Grapes grown in dry, hot localities, are rich in saccharine properties, and produce a large percentage of syrup and sugar.

Sugar makers and scientists have often pronounced it impossible to make a good quality of sugar from fruits which also contain an acid, as the acid cannot be neutralized without destroying the sugar. But we believe there is a difference in sugars of this character and the down grade grape sugars extracted from other substances, and that a process of refining and granulating grape sugar, or sugar of gapes, will soon be discovered. Should such be the case, sugar making from grapes will some time be a grand industry. The nearer to perfection of maturity and ripening a grape gets, the more sugar and less acid it contains; so by still further completing the natural process of ripening by artificial means the sugar attains a high degree of perfection.

The acid in common grape fruit sugar prevents granulation, but it is healthful, and for many domestic purposes is equally as good as cane, or pure sweet sugars. A process that will perfect the sugar of grapes will make the discoverer independently rich, and also enrich the growers, and largely benefit the country and the world. But even a good common quality of sugar and syrup, from grape fruit, will pay, and we are glad to see it becoming a permanent industry.

RAISINS IN STORE.

There are at present about eighty tons of fine California raisins in the storerooms of the Grangers' Business Association, at San Francisco. Upwards of forty-five tons were put up by S. K. Chandler, of Yuba City, Sutter Co., and the remainder by various parties in the southern counties, and elsewhere.

RAISIN GRAPES.—Among other productions of this valley that doubtless will attract much attention in the future, is the raisin grape. That the cultivating of this grape in this county is a success, is known by actual experiment. Raisins produced in this county were sent to New York city last year, which were pronounced the best raisins that had ever been in that market. Why should we let other countries grow rich from a production when we can produce a superior kind. Much money is paid, not only from other States, but also from this State to other countries and the island trade annually for raisins, when we have every facility for producing the same, of a better quality, at home. We are glad to see that some of our citizens are taking an interest in this respect and starting vineyards of the regular raisin grape. When agriculture is brought to a higher standard this will be a source of much wealth.—*Tulare Times.*

RAISIN MAKING is no longer an experiment in this State. That good raisins can be made here, and that the business can be made to pay well, is fully settled, and California raisins are already a standard commercial article. Nor does it require any great outlay of money to prepare for raisin making. The preparation is within the means of the smallest grower, and the process is simple and easily learned, and may be carried on in a small way just as successfully as on a larger scale. Indeed, the small operators generally succeed the best, as they generally give to the business their immediate care and attention, and care and attention are the principal requisites to success, the proper variety of grapes being possessed. In all raisin making countries nature furnishes the necessary heat, while man provides the means of exposure of the fruit in such a way as to secure the heat in the most effective manner.—*Record-Union.*

THE CONSUMPTION OF RAISINS in this State is estimated at from 15,000 to 18,000 boxes. If this estimate be correct, there will be a surplus of from 2,000 to 5,000 boxes from this year's crop for export. The cost of production and marketing the native raisin is about as follows:

Three pounds of Grapes to one of Raisins, at 2 cents	6c
Cost of curing and packing	1c
Boxes	1c
Freight to and handling at San Francisco	1c
Freight overland, in Greenbacks, 1¾, and commissions East	2c

Thus the total cost of curing and placing California raisins in the markets of the East does not exceed 11 cents per pound.—*S. F. Bulletin.*

THE RAISINS produced in our State are meeting with great favor in the Eastern States, and have been pronounced by a convention of leading dealers to be full weight and superior in quality to the imported Malagas.

Sheep and Goats.

History of the Angora Goat in the United States.

BY R. PETERS, ESQ., ATLANTA, GA.

[From the American Agriculturist.]

INTRODUCTION INTO THE UNITED STATES.

DURING the administration of President Polk, the Sultan of Turkey requested that a suitable person be sent to that country to experiment in the culture of cotton. Dr. Jas. B. Davis, of South Carolina, was selected and commissioned to perform this important service. On his return, in 1848, the Sultan, desiring to reciprocate the courtesy of the President, caused nine head of the choicest fleece-bearing goats in his dominions, to be selected and presented to Dr. Davis. These doubtless were selected from the herds of Angora, a district of country lying among the Taurus Mountains, which traverse Asiatic Turkey, and which derives its name from its principal city, situated about two hundred miles east of Constantinople. In 1854 I visited the farm of Dr. Davis, near Columbia, S. C., and found his stock of pure-bred Angoras, (these goats are called by the Arabs *Chamal*, or Camel-goat, meaning "soft," or "silky,") to consist of seven females and two males. Besides these he had one pure-bred Thibet ewe, several head of one-half Thibet and one-half Angora, and quite a number of grade females, bred from the common short haired ewe goats of the country, and his Angora bucks. I purchased all the pure-bred Angoras, and several of the Thibet-Angoras. Dr. Davis had fallen into error as to the native country of his goats; and and believing them to be *Cashmere*, quoted their fleeces as being worth from six to eight dollars per pound, while in reality they were Angoras, whose fleece, known to commerce as "mohair," has been an article of import into Great Britain and this country for years, and held at from sixty cents to one dollar per pound.

CHARACTERISTICS AND HABITS.

I have owned Angoras selected from six distinct importations from Asia, and have found them to differ greatly in size, fleece, and horns, and the shape of the ears. It is easy to trace several varieties of crosses in many of the importations, occasioned, doubtless, by the fact that stock-breeders, in their native country, are ignorant of the system prevailing here, of breeding up from point to point, and more generally to the admission of stray bucks from distant localities into the various flocks. In fact, it may be safely asserted that we have in this country, any quantity of grade goats far superior to many that have been imported. In the absence of any other standard than that suggested by my own judgment, founded on my experience with these valuable animals, I have for twenty years observed the following rules in selecting a stock buck. 1st. Pedigree dating back to ancestors imported from Asia. 2d. Weight and length of the long, silky, ringletted, white fleece, and its freedom from kemp and mane on the back and neck. 3d. Form, size, and vigor. 4th. Long, pendent ears, and upright, spiral horns.

By a persevering and studious adherence to this system of selection, I have obtained a flock of great uniformity. The Angora is a hardy, industrious, and nearly self-sustaining animal—subsists in its Asiatic mountain home almost-entirely by browsing—and may be classed as herbivorous. Being active and vigorons, they roam over wide ranges of wild, rugged country, in search of food, utilizing and giving value to worthless vegetation, refused by most other animals, and will feed and fatten double the distance from water that sheep can, as they travel much faster, and can endure more. The Angora seems not to succeed well in the Middle and Eastern States, where they are imprisoned (as it were) in small enclosures, and kept on grass in summer, and in closed barns in winter. Although from a locality on the fortieth parallel of latitude, north, they thrive best below that line on the Atlantic coast, though they do surprisingly well on the Pacific coast, as far as introduced, but especially in California, New Mexico, Colorado, and Arizona, whose climate and topography is said to closely resemble that of their Asiatic home, with its wet and dry seasons. It cannot brook—scarcely endure—confinement, but loves to roam at will over the highest mountain peaks, thriving and yielding its rapid increase of progeny, and its ringletted, silky fleece, where other stock will starve. It is a singular fact that while the Angora will live in the snow all winter, in the southern latitudes, and do well on browse, they will die in a northern latitude, housed and fed, or in a very wet climate. Efforts have been made to acclimate them in England, and signally failed; while in France, after an expenditure of $350,000, they are likely to succeed in but one locality of limited extent. If not sooner sheared, the Angoras shed their overcoat of "mohair," in March or April of each year. Their winter coating then grows slowly until about July, when the "mohair" starts and grows very rapidly, until January, when it gains its full growth, averaging about nine inches in length. The Angoras live to a greater age than Merino sheep, and are more prolific. I have three ewes in my flock, numbered by the Randall system of notches in the ears, so there can be no mistake as to their identity. No. 53 was dropped in 1861. She has raised 21 kids, brought her first in 1862, and her last in 1875, is now very feeble and on the decline. No. 68 was dropped in 1863, and No. 69 in 1863, both brought fine kids in March, 1876, at the age of 14 and 13 years.

AVERAGE ANNUAL CLIP.

Pure-bred Angoras will yield from five to eight pounds of "mohair" per clip, with one notable exception of a ten-pound clip from a celebrated no-horned Costanboul buck, the property of Mr. Landrum, of California. The general uniformity of the yield is is indicated by the fact that in 1854 I sheared six and a-half pounds of "mohair" from a buck of the Davis importation, referred to above, and in 1876 I sheared exactly the same quantity from one of his descendants.

VALUE OF THE FLEECE.

The market value of mohair, like all other commercial commodities, may be expected to fluctuate in accordance with the laws of supply and demand. But as the production is now, and for many years must continue to be unequal to the demand, prices must remain at, or approximate those now current. In the meantime improvement may reasonably be expected in the yield, the quality, and its preparation for market, at an inappreciable increase of cost. I have already quoted it at from 60 cents to one dollar per pound. But the shrinkage in all values within the last twelve months, has affected "mohair" also. As to present [August] prices the following returns of a small shipment to the Jamestown, N. Y., Manufacturing Company are respectfully presented:

JAMESTOWN ALPACA MILLS,
Jamestown, N. Y., July 18th, 1876.

RICHARD PETERS, Atlanta, Ga.,

Sold To HALL & TURNER,

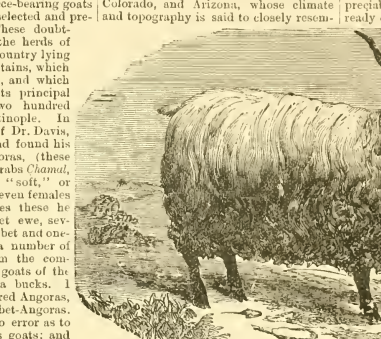
(Mohairs, Alpacas, Poplins and Worsteds)

185 lbs. 1st quality Mohair	@	75c.....		$138.00
55 lbs. 2d	do	do	@ 60c.....	33.00
10 lbs. 3d	do	do	@ 55c.....	5.50
7 lbs. black	do	do	@ 45c.....	3 85
43 lbs. ¾ grade	do	do	@ 20c.....	8.60

USES OF ANGORA GOAT PRODUCTS.

"Mohair," the commercial name of the fleece of the Angora goat, is used for the manufactures of which wool may form a part—but its length, great strength, and silkiness of fiber, and its beautiful luster, and the fact that it readily receives dyes, which, once set, are indelible, gives it a higher market value, accompanied by a rapidly increasing demand. It is manufactured principally into poplins and alpaca goods, that are known as mohair goods, and into plushes and braids.

In California and other of the Pacific States, large flocks of grade Angoras are being bred for their skins, for which there is an increasing demand at San Jose, California, by the Angora Robe, Glove and Mat Manufactory. The carcass is highly prized, wherever introduced, as food, while the milk is highly esteemed for domestic use and the sick room. Taken altogether, the Angora may be regarded as a very valuable acquisition, and an addition to the resources of our husbandry—especially in the Middle, South Atlantic, Western and Pacific States. The great hardiness and beauty of the animal, its almost entire freedom from disease, its self-sustaining qualities, and the rapidity with which it multiplies itself and grows, must make it a universal favorite.



THE FEMALE ANGORA GOAT.

CAN IT BE CROSSED WITH SHEEP?

Prior to the year 1860 I tried many experiments, in hopes of obtaining a cross between the goat and sheep, and failed in every instance. Extensive correspondence with other breeders has convinced me that the cross cannot be obtained. Dr. John Bachman, the celebrated naturalist of Charleston, S. C., who was in correspondence with the most distinguished naturalists of Europe, informed me that he had no faith in the theory, and did not believe the cross obtainable. He stated, however, that Cuvier, the renowned French naturalist, claimed to have examined a specimen of such a hybrid, but Dr. Bachman himself believed that Cuvier had been deceived, or had made a mistake.

INTRODUCTION INTO CALIFORNIA.

In the spring of 1861 I shipped, by Adams Express, to St. Louis, two 16-months'-old bucks to Mr. Wm. M. Landrum, then of Joaquin county, California, who, at the ensuing State Fair, in September, received a special premium for the introduction of the Angora, or "Cashmere" goat—a large size silver goblet. From St. Louis they were transported by steamer to Fort Leavenworth. Thence they traveled on foot with the wagon train, browsing on what was rejected by other animals, and arrived uninjured, and in good condition, at their new home. One died of snake-bite, after siring about thirty kids. The other, widely and popularly known on the Pacific Coast as "Billy Atlanta," and "King of the Cashmere Goats,") lived to be ten years old, (when he was accidentally killed,) and sired about 2,000 kids. This buck won the sweepstake prize, against all competion, at every fair down to that preceding his death; his numerous descendants are scattered all along the Pacific Coast, and his blood courses in the veins of over one-half the Angora flocks in the several grades, in that part of the Union, estimated to approximate 70,000 head.

In November, 1867, Mr. Landrum imported eight head, and these were followed in December by seven imported by Gray & Gilmore; and these by three imported by Mr. Flint. In 1868 Gray & Gilmore imported seven more, and Messrs. Landrum, Butterfield & Son imported two bucks—one of which was the celebrated no-horned Costamboul already mentioned. Soon after, in the same year, (1868,) I sent out 25 head of choice pure-bred goats by Mr. E. Holland, of Atlanta, 17 of which were bought by Landrum, Butterfield & Son, and the other eight by various parties in California.

In 1870 Diehl & Brown shipped ont most of their stock, 60 of which survived, and passed into the hands of Butterfield & Son. In 1871-72, Shearland & Thomas imported the larger portion of the Eutychides flock, and in 1872 Landrum & Rogers bought the greater portion of my pure-bred stock. Thus it will be observed that about one-third of the pure-breds introduced into California, was contributed from the first and original (Davis) importation of 1848; and that its blood is present in probably two-thirds or three-fourths of the Angora stock on the Pacific Coast.

SUGGESTIONS AS TO FUTURE IMPORTATIONS.

As already intimated, the importation of Asiatic goats has been promiscuous,

and in many cases from chance lots of ill-bred, ill-assorted stock. Few have been imported direct from their native mountain country; the greater portion having been purchased near the coast by persons unacquainted with the business, and more interested in speculation, than regard for, or a desire to improve the stock. Mr. John M. Harris, of California, is an exception, he having, last year, visited both Casemere and Angora, and after observation and inquiry, decided in favor of the last named as the best adapted to this country. He purchased and imported two bucks and ten ewes, (all yearlings,) which, with their increase on the way, cost him at the time of landing over five hundred dollars each.

To obtain the finest specimens of pure-bred Angoras, I am clearly of opinion that some experienced breeder should go direct to the native home of the goat and remain one or more years, select and breed there, and thus by securing an improved stock, obtain animals which would be a decided improvement on many of the previous importations, and prove a really valuable addition to our Angora stock.

THE GOAT OF THIBET THE TRUE CASHMERE.

The name "Cashmere" is derived from that of the city where the far-famed Cashmere shawl is made, but the wool entering into its manufacture is obtained from the *undercoat* of the goat of Thibet —the home of which goat is among and between the principal and secondary ranges of the Himalayas, near the regions of perpetual snow, from 10,000 to 22,000 feet above the ocean, distant northwesterly about 1,500 miles from Calcutta, and 2,500 miles east of Angora.

Dr. Davis brought with him from Asia, in 1848, besides the Angoras, a pair of Thibet goats. The male died soon after his arrival in this country. The female was smaller than Angoras, narrow in the chest, with fox-ears, and rather short, upright, spiral horns. She had an undercoat of downy wool, and an overcoat of white hair about four inches long. This undercoat is combed out by the natives as it starts to shed in the spring, and is used by them in the manufacture of the Cashmere shawls.

In 1859 I bought a male Thibet goat, and three females having the appearance of being half Thibet and half Angora. The Thibet male bore a strong resemblance to the Thibet female imported by Dr. Davis. I combed out his undercoat of wool early in April, 1859, but could make no practical use of it.

In 1854, when about to invest in Thibet and Angora goats, I was advised by Dr. Bachman not to purchase the Thibet goats, but to rely on the Angoras, as, in his opinion, the Thibet goats, like the Llamas of the Andes, could not be successfully acclimated in a locality under 10,000 feet above the ocean. His opinion proved to be correct in my case, as all the Thibet goats in my flock, pure and graded, died in a few years after I purchased them, from a disease of the lungs combined with dysentery, and I have heard of no one having been successful in the United States east of the Rocky Mountains, with the Thibets or Llamas. I am inclined to believe, however, that with care and attention, both can be acclimated and profitably bred on the elevated plateaus of California, Colorado, and New Mexico, and perhaps other portions of that highly favored portion of the Union.

THERE are six bearing orange trees in Marysville within a distance of two blocks. They range from 50 to 100 to the tree.

Forest Culture.

Fallen Leaves.

The wintry breeze disrobes the trees
And leaves them sad and cheerless,
Whose lean arms dread no alarms,
Like giants bold and fearless.
The withering blast comes rushing past
And grasps the leaves in cold embrace,
Till on the ground the glow is found—
Their beauty perished in its place.
The summer flew and autumn too,
Then chilly night and morning,
Came down amain, with ice-cold rain,
And snow them without warning.
They trembling pass across the grass,
Or on the path of gravel,—
Making a bed soft to the tread,
Where children like to revel.
The rustling noise delights the boys,
Who are in but life's dawning;
While from the trees by slow degrees,
Come signs of death-like warning.
Like flocks of quail, are they sail,
A whirling, golden column,
Leaving all pale to meet the gale,
The maples bare and solemn.
They pile the ground in heaps around;
I hear in walking through them,
A wrestling voice, as'if they called
To one who loved and knew them.

FORESTRY.

MAN, in an uncivilized and in a half civilized condition, depends upon the wild forests that nature in some localities has bestowed with a lavish hand, for all the fuel and timber that he has found it necessary or convenient to use. As civilization has advanced and population increased, the increased demand for timber in many industrial directions have denuded vast tracts of land of timber trees, and caused a scarcity while the demand has proportionately increased. Other vast tracts of land, rich in soil and productive capacity, but naturally destitute of timber or other trees, have become settled up and cultivated to food-producing plants, to stock raising, etc., still further increasing the demand for timber.

Forest culture has not kept pace with this demand, nor has it met with the encouragement nor been given the attention that it deserves. In this respect our civilization seems not in a very advanced state to-day. To be sure iron, and some other materials, have supplanted and taken the place of wood in the manufacture of many implements, and in uses where, were wood more abundant and cheap, it would have retained its supremacy. But certain it is that this branch of culture has not attained to the influence in the general estimate of farmers that it deserves. There is great need of this subject being often discussed, and constantly kept before the public, that the masses may be educated, as it were, to a realization of its importance in our domestic economy, and of its sure return of profit to the cultivator. Also our farmers, who are generally ignorant upon the subject of propagation and culture of the different kinds of the valuable forest trees need to be instructed therein, and many of them really desire a complete knowledge upon this subject, and would venture upon the same as a diversion at least, had they the requisite information and data upon which to make a beginning.

It is in the beginning that knowledge and care of tree culture is especially required. Once started, and two or three years grown, and but little knowledge would be needed, and no more care than any person of ordinary intelligence could give. Our nurserymen would confer a favor upon the public by giving, through our columns, directions for planting seeds and cuttings of forest trees, and how to cultivate until the trees are established in the soil. They would also do well to keep a stock of such material in the way of seeds and cheap seedlings as are best to plant for forests. Trees that have been grown two or three years in the nursery are generally held at too high prices to plant for a forest and are not so fit for the purpose as trees not over six months or one year in the seed bed, while some kinds are better planted at once where they are to grow. The best arrangement that the farmers of any section could make would be to co-operate together to start forests employing a suitable person to oversee the whole, to start seedlings and cuttings by the wholesale, under favorable conditions, and apportion them to planters.

One man could start and care for the stock of seedlings and young trees for twenty or more farmers, and his wages divided among so many would be but a trifle to each. But as our farmers and communities are generally as backward in co-operative movements as they are in tree planting, we fear that this advice, however rational it may be regarded, will fall upon poor soil and be lost. A higher civilization that will exclude some of the selfishness and indifference that neighbors usually hold towards each other must first be cultivated before men will associate together in many economical ways to their individual and social advantages.

Leading the question of "how to grow a forest," is the all important one, "is there money in it?" Statistics upon this point are already abundant and conclusive. It will pay any farmer to cultivate a few acres of forest and in many localities the soil can be put to no more remunerative use.

The best sorts and varieties of trees to cultivate for timber and fuel is another important matter. Of course this will largely depend upon the soil, climate, and demand for special classes of timber. The same judgment is required in this regard as in any other branch of culture upon the farm. There is always a best kind of everything, best suited to localities and conditions, and it takes a good farmer to always know what is best. But it is safe to plant out a variety, and as the trees grow, extend the culture of such as prove the best adapted to your locality. Almost any kind of a tree is better than none, and will pay for culture.

The conditions favorable to the growth of seeds and young trees are light soil—either naturally light or made so by cultivation—moisture, and a surface shelter of mulching composed of leaves or strawy manure. Forest tree seeds of all kinds are best sprouted in beds before planting, and some kinds should be allowed to grow in beds a whole season and then be transplanted.

The seeds of nut bearing trees, such as pecans, walnuts and acorns, should be sprouted in compost beds of sand and half decomposed leaves or rotted straw. When the sprouts are an inch long the nuts should each be carefully planted where they are to grow, in a shovelfull of the same compost. The sprouted seeds must be carefully handled and transplanted by hand, pressing the soil firmly about it, and covering with mulch or compost only. The ground can be laid out with furrows the same as for potatoes or corn, with crosss furrows, planting the seeds where the furrows cross, thus insuring straight lines and equal distances for convenience in cultivating. The trees of this species send down deep tap roots the first season, and will grow in quite dry soil, but better in moist. No weeds should be allowed to grow among them to absorb away the moisture, but the surface should be kept light to retain it. Trees of the maple family should be grown one year in seed beds, made of rich earth, sand and decomposed vegetable matter, thoroughly spaded together, and then be transplanted where they are to grow. The willow and cottonwood family can be grown from cuttings as well as from seeds. These may be planted at once where they are to grow if the soil is irrigated or quite moist, or they may be grown a year or two in nursery.

Evergreens, such as pines, cypresses, firs, spruces, etc., are best started from seeds in seed beds, or boxes, and grown a few months, or a whole year, before they are planted out in forest. They may be grown in nursery a year or two and then be transplanted, but this would require extra labor. The same may be said of the eucalyptus and other evergreens.

Where the soil can be irrigated vegetables may be grown on the same ground a year or two, until the trees get large enough to occupy the ground.

A forest should be planted out a good deal closer than the trees are expected to stand. We would plant the trees not over four feet apart. In a few years when they get crowded and want more room, remove every other one, and so on, until the requisite size and distance is attained. Several sorts of trees may be planted together, for the purpose of removing a portion of them at different ages for fuel, fence poles, posts timber, etc., leaving at last whatever trees were preferred."

Trees growing pretty closely together make straighter trunks and are clearer of large limbs, such as would injure for timber. Trees growing in the wild forests in our climate are so deeply rooted that it almost impossible to remove them with success for transplanting, and it is better to depend upon growing them from the seed or cuttings. In the East, where the roots are kept near the surface by a shallow soil and much moisture, the case is somewhat different. Our nurserymen in this State have to irrigate to keep the root growth near enough to the surface to make the removal of the trees with good roots and with ease possible.

These few suggestions we offer as a preliminary to much that we propose to publish on this subject in future numbers of this journal.

The Value of Forest Trees for a Shelter.

No farm can be considered complete without at least a shelter of trees; enough to break the winds and furnish fuel and timber for home consumption. The *Western Advertiser* says:

"We have often urged the wisdom of having a grove at the rear of the farmhouse to shelter the back premises and protect the outbuildings from storms. The other day we saw our ideal in this respect realized. A farmer in Nassageweya has had the good sense to reserve about an acre of wood-land, mostly second growth, at the rear of his dwelling-house. It consists partly of deciduous and partly of evergreen trees, and even at this season of the year has a cosy, comfortable look. Here the chickens wander about, and here the children play. A soap-leach, oven, and various domestic conveniences are partially hidden and sheltered. The best of all is the complete protection afforded from the cold northwestern winds. Both the stock and the human beings on the place will feel the good of this during the cold season of the year."

The *Country Gentleman* says that "Smith & Powell of Syracuse have for many years employed evergreen screens on a portion of their nursery grounds to much advantage. Plants on the lee side of a screen thirty feet high, are visibly benefitted by the protection to a distance of forty or fifty rods, and more distinctly for twenty rods. In one instance, a fifteen acre wheat field thus protected bore an excellent and even crop; while in another field exposed to the sweep of winds, it was killed in patches, and, as was estimated, yielded only one-half as much as on the sheltered land. Grass near the screen furnishes earlier pasturage than on the exposed surfaces."

Mr. C. S. Abbott, of Salinas, uttered the following on this subject in an address before the Agricultural Association of his county last fall: "The subject of shelter has not been sufficiently considered or discussed in this country. When you cut down a large piece of woodland, you change the climate of the tract of land which has been sheltered by it from the force of the prevailing winds. When you clothe a piece of land with timber, you make a milder climate for the land lying to leeward and sheltered by it. Who has not observed that the vegetation was much the rankest on the lee-side of a fence, as our winds in summer time always blow in the same direction? Instead of a fence, suppose a belt of gum trees, (say twenty or thirty feet wide) were planted across the valley every half mile, which in ten or fifteen years would be from 60 to 100 feet high. This would not only furnish fuel for the entire population, but would entirely break the raw coast winds from the valley. Then the light showers that fall during the night at the close of the rainy season would have the desired effect on the growing crops instead of being licked up by ten o'clock the next morning by a gale from the northwest. The roots of the trees would strike deep into the soil, sap the moisture from the earth and diffuse all through the pores of the earth into the atmosphere. A large percentage of the tree itself is water; moisture attracts moisture, hence it is more likely to rain in timbered countries than on arid plains. Take for example the amount of rainfall from Cape St. Lucas to Puget Sound, and you will find that it varies from sixty inches to nothing, according to the density of the foliage."

The Stockton *Independent* says: "There is every reason and argument in favor of, and no objection against it. If cordons of trees a few miles apart were planted across the valley, a perfect barrier and wind-break would be formed, to prevent the disastrous results that are frequently felt in the grainfields from the drying, withering, scorching north winds that come in that critical period when the young grain is in milk and before it has reached a safe maturity. A single year's loss in grain in this valley from the effects of the north wind would be sufficient to plant all the trees that could be induced to live for years to come. The lack of firewood is another inducement to tree-planting, and the shade that they would give to stock would go far to alleviate their sufferings in the heated term, when the valley is like a fiery furnace. Trees plentifully and systematically planted would also effect such a change in the climate of the valley that its barrenness would be transformed to fruitfulness, and moisture would be retained in the soil throughout the year. The present is the most favorable season of the year for tree planting, and its prosecution should be given every encouragement. Large areas in France have lately been planted with forest trees on tracts of land that have become unfruitful for other purposes, and it is said that they are flourishing finely. It is said that 5,000,000 hectares, or 12,350,000 acres—about one-half the area of Ohio—have become unproductive as agricultural lands. Pine trees, without any cultivation and a very inexpensive supervision, can be made to grow upon these barren acres, netting about $30,000,000 per annum. Other trees have been planted with similar economic results, and now landed proprietors are looking to tree planting as a means of utilizing their unproductive acres."

THE EUCALYPTUS.

The Eucalyptus, or Australian gum tree, is so well and favorably known in California, that little need be said in its favor. It is bound to be the forest tree on this coast, owing to its rapid growth, tall, straight trunk, strength and elasticity of timber, value as fuel, and general usefulness as timber. For the first ten years of growth, the blue gum will average ten feet a year, or 100 feet high in ten years, when grown on deep, rich, moist soils, and it will grow very fairly on dry soil. Here is a description of the four principal and most valuable varieties of this tree, as given by Baron Ferdinand Von Mueller, of Australia:

EUCALYPTUS GLOBULUS.

(Blue-gum tree of Victoria and Tasmania)—This tree is of extremely rapid growth, and attains a hight of four hundred feet, furnishing a first-class wood. Shipbuilders get keels of this timber 120 feet long; they also use it extensively for planking and other parts of the ship.

It is considered superior to American Rock Elm. A test of strength made between some blue-gum, English oak and Indian teak, showed that the blue gum carried 14 pounds weight more than than the oak and 17 pounds 4 ounces more than teak upon the square inch. It is extensively used by carpenters for all all kinds of out-door work, for fence rails, shafts and spokes of drays, and a variety of other purposes.

For railway sleepers it lasts about nine years. The wood is of a yellowish grey tint, with a close, straight grain. The seeds are extremely minute, an ounce containing several thousands. As an absorbent or neutralizer of malaria the Eucalyptus Globuls is believed to possess remarkable qualities. Pestiferous swamps in Algiers and other countries have been planted with it and have become healthy localities.

Through the efforts of the Italian Patriot, General Garabaldi, the deadly Campagna, near Rome, is about to be planted with Australian blue gum.

EUCALYPTUS ROSTRATA.

(The red gum-tree of Victoria, South Australia, and many river flats in the interior of the Australian Continent.)—It is a hard, dense wood with a handsome, curly, but rather short grain. It is almost entirely free from the tendency to longitudinal shrinkage which is the invariable characteristic of all the other varieties of Eucalyptus. It is of extraordinary endurance underground, and therefore, highly valued for fence-posts, piles and railway sleepers. It is extensively used by shipbuilders for mainsterns, inner-posts, dead-wood, floor timbers, futtocks, transomes, knightheads, hawse-pieces, cant, stern, quarter, and fashion timber, windlass, bowrails, etc. It should be steamed before it is worked for planking. Next to the Jarrab, from western Australia, it is the best wood for resisting the attacks of the sea worms and white ants. Its possible uses are almost too various for enumeration, as an instance of which it may be mentioned that it is used with great advantage and economy for the bearings of machinery, the cost being almost nominal as compared with brass, whilst the material is equally serviceable and almost indestructible.

EUCALYPTUS AMYGDALINA:

(In the sheltered, springy forest glens of Victoria attaining not unfrequently a hight of over four hundred feet.) The wood splits easily and in a straight direction. It is well adapted for shingles, rails, house building, for the keelson and planking of ships, and for other purposes.

Seedlings raised on rather barren ground near Melbourne, have shown the same amazing rapidity of growth as those of the Eucalyptus Globulous, but not so easily satisfied with any soil. Baron Von Mueller notes a fallen tree of the Eucalyptus Amygdalina, which mensured 420 feet; one on the Black Spur, near Healsville, of 480 feet in hight; and another one of which the length of stem from the base to the first branch was 235 feet, girth of stem at three feet from the surface 41 feet, diameter of stem a first branch 4 feet, length of stem from first branch to where its top was broken off, 70; diameter of stem where broken off, 3 feet.

EUCALYPTUS SIDEROXYLON.

(Iron bark tree.)—It attains a hight of 100 feet, and affords a valuable timber, possessing great strength and hardness. It is largely employed by wagon builders, for wheels, poles, etc.; and is also used by turners, for rough work. It is considered the strongest wood in the Colony, and is extensively used in underground mining work.

The Forests of the World.

The forests of Europe are estsmated as being 500,000,000 acres in extent, or about 20 per cent. of the whole area of the continent. In North America it is reckoned that 1,460,000,000 acres are covered with trees, of which 900,000,000 are in British North America. In South America the forests occupy 700,000,000 acres. The total amount for the two continents of the New World and Europe gives 6,600,000,000 geographical miles. The proportion of forest land to the whole area of Europe, as above stated, is computed at 20 per cent.; in America 21 per cent. Supposing, therefore, 20 per cent. to be the proportion in Asia, Africa and Australia, the grand total of the forests of the world would cover a space of over 7,734,000,000 geographical miles. The areas of State forests and woodlands are estimated at the following figures in the following European countries: Prussia, 6,200,000 acres; Bavaria, 3,294,000 acres; France, 2,700,000 acres; Austria, 2,230,000 acres; Hanover, 900,000 acres; Wurtemburg, 469,007 acres; Saxony, 394,000 acres; England, 112,376 acres.

The range in the height of trees varies from the miniature alpine willows of a few inches in height to the stupendous Wellingtonia, which grows to the height of 350 feet, although it is stated that one of the eucalypti often reaches a height of 450 feet in Victoria. In Schavonia, a tree called the sapin attains a height of 275 feet, and the umbrella pines of Italy 200 feet. The California big tree is said to girth 96 feet.

The destruction of woods and forests, however, is very enormous, and in the majority of instances no attempts are being made for their reproduction. In South Africa, we are told, countless numbers of beautiful forest trees are destroyed and laid waste annually. In New Zealand the 30 per cent. of forests existing in 1830 had sank to 28 in 1867, and to 18 in 1873, which rate of reduction, if continued, would result in the total destruction of New Zealand forests by 1889. In America, in the United States especially, the consumption of timber is enormous, and although public attention has been called to the matter, and the United States statute of March, 1875, imposes a fine of $500 or a year's imprisonment for wanton injury or destruction of trees, and also a fine of $200 or six month's imprisonment for allowing cattle to injure trees "on national grounds," the yearly consumption and improvident use of timber is almost incredible.—*Land and Water.*

THE PECAN.

This is a variety of walnut, a native of the warmer portions of the United States, and flourishes in a natural condition on the alluvial soils along creeks and river bottoms. We have seen it growing in Texas in forests, as the oak grows in the Northern States, and have gathered bushels of the nuts. They are very rich—we think superior to any walnut. The trees produce abundantly and grow large. The timber is excellent for all purposes where ash and walnut are used. It is not so tough as the hickory, but is strong, elastic and serviceable. The tree is a rapid grower, soon attaining a size for use as timber. We are of the opinion that this is the most valuable nut and timber tree combined, that can be cultivated in California, and we desire to see it become popular and extensively cultivated. The following we quote from the *Prairie Farmer*, as it contains the sort of information most desirable:

THE COMING TIMBER TREE.

For several years I was casting about for a tree to plant for timber, for fuel, fencing, etc., upon the prairies; one that would be hardy, easily transplanted and of tolerably rapid growth. I watched with much interest experiments made by other parties having the same end in view, and felt equal disappointment with them at their ill success in obtaining the object of their search, namely, the best tree, all things considered, for the western prairie.

The cottonwood was hardy and of rapid growth, but worthless as a timber tree, and very inferior as fuel. The locust would sprout from the root so as to become a nuisance, and the borers ruined the groves. The gray willow did not realize the anticipations formed of it, even as a fencing material. The soft maple was valuable for wind-breaks and for fuel, but was not a timber tree. At this point I thought of the pecan (*Carya olivæformis*) a species of hickory, a native of the Illinois and Mississippi valleys. I satisfied myself, by experiment and investigation, of its value as a timber tree; wagon and carriage makers, wherever they had used it, testifying of its value as being equal to the best of white ash, for all purposes of buggy or carriage manufacture; possessing equal durability, and greater strength and elasticity. At various points on the Mississippi river, steamboat carpenters who had used it, found it a valuable timber in boat building. As a fuel it has no superior. But would it grow and thrive on our prairies?

To test this, in the fall of 1871 I dug up in the bottom land, along the Illinois river, a dozen or two young trees, heeled them in my garden for the winter, and in the spring removed them to my farm on

the prairie. The summer of 1872 was hot and dry, but all the trees grew and did finely. Next year I increased my planting, and thus far have three different settings of trees. I find it as easily transplanted as any tree I ever handled, having never lost a tree. Of vigorous growth, clean and healthy.

By my advice several of my friends have procured and planted this tree, and I have five hundred more which I intend to plant the coming spring.

The pecan tree ordinarily commences bearing at about eight years of age. It bears one of our finest nuts, which sold in the Cincinnati market, for the past six years, at an average price of five dollars per bushel.

A gentleman in the southern part of this State, who has a pecan orchard, partly natural, which he has increased by further planting, says "it is of more value to him yearly than his apple orchard."

The pecan tree is grown readily from the nut, if it is not allowed to become dry before planting. But to those who are so situated as to be able to procure thrifty young trees, of one or two years' growth, I would say get the trees. And to the farmer who is contemplating planting trees on the prairie for shade, for timber, nuts or fuel, or for an inheritance for his children, I would say plant the pecan, and future generations shall bless thee. L. Harrison.

Peoria, Ill.

German Forestry.—The aim of scientific forestry, in its present most advanced state, is to convert the regular growth of a woodland district into what is called a *geschlossener Bestand*, or compact forest; divided into distinct blocks of trees of equal age. The usual *Umtrieb*, or ortation, for beech, *Hochwald*, or high forest in Hanover, which may be taken as the model state, is 120 years. The forest is so divided that there shall be as nearly as possible six equal areas, allotted to as many periods of 20 years growth. Thus one block will be full of trees, not exceeding 20 years old; a second, trees from 20 to 40 years old, and so on. When a block arrives at the last periods felling commences by a *Vorbereitung* or preliminary clearing, which is little more than the ordinary thinning carried on from time to time in former periods. The beech in these woods only ripens its seed every third or fourth year. After the first seed year in the final period, a *Lichtschlag*, or clearing for light, takes place, in order to afford light for the germination of young seedlings; the finest trees being left standing. When the ground is well covered with seedlings the old trees are felled and carefully removed, and the block recommences growth. The tendency to a gradual removal of the old trees appears to be on the increase, so as to make the culture approach as nearly as possible to the natural growth of a wild forest.—*Edinburgh Review.*

Walnut Lumber.—Of all timber trees, the black walnut is at the present time believed to be most profitable. Prices have been so tempting that in many localities no more of any consequence are found. Ohio and Indiana have of late years been the great sources of supply. From these States large quantities have been sent to the furniture factories East. At the present time Kentucky is shipping walnut timber largely. While, however, the older States are being depleted of this valuable wood, the States that may be called timber-planting ones are rapidly coming up with a supply. It is found to grow with great rapidity in some of them, and especially in Nebraska. In this State several acres set out within the last ten years are already producing nuts in abundance, and these, it is said, have already paid the expense of planting and care. Many people, in view of the growing scarcity of walnut, fear its disappearance from market in a short time. It would be no matter for alarm if the extensive Western plantations were known. —*Forney's Weekly Press.*

The Eucalyptus in Algeria.—After successful plantings of this tree at Fondouk, Rouiba, and Hussein-dey, in Algeria, its culture was commenced on a large scarle in 1867. The first plantings have already produced wood that can be utilized in carpentry and wheel-wrighting. Planks over 40 feet long have been cut, showing that after eight years of growth this tree will produce timber of great value and utility. A proprietor, on his own account and for other parties, has, since 1867, planted about 200,000 trees of this variety, and has already sold 50,000. The hygienic qualities of this tree, claimed by writers in other countries, do not appear to have been realized in Algeria. The plantations have had a remarkably thrifty growth, yet no diminution in the cases of malarial fever are noted. The wood is harder than that of any other species growing in that region, and its production promises great profit to the growers, meeting, as it does, a specific necessity of the people.—*April Report, Department Agriculture.*

Ten millions of acres of wood lands are said to be swept off every year by our present population, and the destruction is constantly increasing. This must eventually make some impression even upon a continent. Alaska and St. Domingo will not supply us with timber. For the good of the whole country, for its highest productiveness, we want at least one-fifth of its whole surface covered with forest. A wise regard to his own pecuniary interests should lead every farmer to retain at least a fifth part of his land in wood. Timber is constantly appreciating in value. He cannot better provide for his old age, or leave a safer inheritance for his children.

Cows.—There are $500,000,000 invested in cows in the United States. Unfortunately, a great deal of this money is not well used. It does not bring in the yearly interest which it might and ought to yield. The average profit which the ordinary farmer receives from his cows is quite small. But they ought to pay well. If they do not, it shows either a lack of skill, or else of care and attention on the part of our owners. A great perhaps the greatest, cause of loss is, most farmers keep poor cows. A poor cow hardly pays, while a good one pays a handsome profit. It will cost but little more to keep a good cow than a poor one. The former will make from six to eight pounds of butter per week for forty-two weeks, worth say thirty-five cents per pound, realizing an income of from $88 to $117, while the latter, making only three or four pounds a week for forty-two weeks, will bring only from $44 to $60 per year. Farmers and dairymen should study these facts carefully when selecting their stock.—*Ex.*

The three year old almond trees at Santa Barbara have this year borne about 3½ pounds of almonds, on the average, while the two year olds yielded about a quarter of a pound. The crop on Colonel Hollister's place amounted to 17,000 pounds.

FLAX FOR FIBRE.

Our article in last month's issue, on flax culture, has attracted the attention of many farmers to the profits of raising flax for seed. In that article we said nothing about its value for fibre. As good fibre can be produced on this coast as anywhere in the world, and at as little expense. What we have to contend with in high-priced labor is more than made up by easily tilled soil and superior working implements to cultivate it and harvest the crop. We quote a few facts from the New York *Mercantile Journal* of interest to our readers:

"During twenty years ending 1874, the exports of wheat from America to England were more than doubled, rising from 27 to 58 per cent of the whole received in England, while the exports from Russia decreased more than one-half, fall from 23 to 11 per cent. of England's receipts. In the same decade, America received 7 per cent. more per bushel for its wheat sent to England than Russia, demonstrating the superiority of American over Russian wheat. America excels Russia in wheat; it could also surpass Russia in flax. It could supply the world with flax. During twenty years America imported 345,000,000 dollars' worth of flax and its manufacturers!

"Russia's flax mills—situated in Poland—employ 300,000 hands, and produced in 1875 $120,000,000 worth, while in 1870 America's production of flax goods was under $3,000,000. Russia ships American cotton, while America spins Russian flax. There may be a good reason for Russia's course in this respect, there is none for America's.

"The organization in Belfast of the Flax Supply Association was instrmental in the successful development of Irish flax. Flax is in Ireland what it should be in America, a principal means of public and private prosperity. In America there are thousands of Irish and Germans whose dormant skilled knowledge of flax might be utilized through a similar society to that in Belfast. Why should not one be organized in New York?

"Political economists attribute England's greatness to its factories and mines, and write of the brilliant prospect before America when these give out, indicating the time when the blasts of Birmingham and Sheffield, and the mills of Dundee and Lancashire, are transferred to the valley of the Mississippi, as the period when we shall become the merchants and manufacturers of the world. There certainly is no need to wait for England's dark hour; now is the time for a new departure in the race for pre-eminence."

The Pacific coast is the place for establishing factories for working up the fibre of flax, for here it can be produced in great abundance, and cheaply produced, too. The following from the *Willamette Farmer*, Oregon, shows what has been done there, and what may be done here as well. We hope it will set our California wheat-growers to thinking that there is possibly a better way than growing all wheat:

"Messrs. Jesse Parrish and Charles Miller, two well-to-do and energetic farmers living near Jefferson, have raised two large crops of remarkable excellence, which was established by the award of a medal at the Centennial, to their product.

"We are glad to learn that they have disposed of their lint—for they have manufactured it themselves—at a very satisfactory price, $300 per ton, which is 15 cents per pound, to Mr. Crane, who has located at San Francisco, to engage in the manufacture of twine, thread, etc. They have to refuse an offer for 10 tons to be shipped to Dundee, Scotland, for the reason that their stock is all pre-engaged. Their flax mill is now turning out 300 pounds of lint every day, and they feel every encouragement to continue the business on a large scale. Mr. Crane, of San Francisco, pronounces their lint a first rate article.

"Fifty pounds of their flax was shipped to Dundee, Scotland, through the agency of Mr. William Reid, Portland, where it was manufactured into linen and pronounced by the manufacturers as good as any in the world. The same company that worked up this sample and made this report, wrote to Mr. Reid that they would send machinery here to manufacture linen, provided they could be supplied with sufficient lint to run the first year. All these facts combine to show that flax fibre can be made a leading industry in Oregon, and lead to the establishment of important manufacturing interests in this State.

"Mr. Miller also informs us that a company is organizing in New York State for the purpose of sending an agent to Oregon to secure the raising of flax fibre to be sent back East and supply factories there. Those who are engaged in manufacturing flax there think there is no such flax raised anywhere as they have received from Oregon. We have then what seems certain to prove a permanent paying product that our farmers can depend upon for a change of crops, and which can be manufactured into lint here, and will eventually lead to the establishment of linen manufactories in Oregon. The permanence of this production and manufacture can be judged from the history of flax culture and linen manufacture for 100 years past in the north of Ireland, where great cities and immense manufactories have grown up, permanently sustained by the successful cultivation of flax in the surrounding country, which cultivation and manufacture have been a source and means of lasting wealth and prosperity. We possess at least equal facilities for growth and manufacture and can therefor count on equally successful results."

Experiments show that the amount of meat obtained from the domestic animals varies greatly, some yielding as much as eighty per cent. while others give only fifty per cent. The average is calculated at fifty-eight per cent. of the live weight of beef cattle. Sheep give forty to fifty per cent. The different products of cattle and of sheep are shown by the following:

	CATTLE.	SHEEP.
Meat	771	56
Skin	120	7
Grease	87	6
Blood	55	5
Feet and hoofs	22	2
Head	11	4
Tongue, liver, heart, spleen and lungs	43	4
Intestines	67	6
Loss and evaporation	166	20
Total	1342	110

While this estimate may not apply to every case it gives the average result of many experiments and may be relied upon in most cases.

It requires talent to so arrange the work of the farm that every portion of it shall be done at precisely the right time. Work done out of season is almost always expensive. In the hurry to catch up there is loss.

[For the California Agriculturist.]

A TALE FOR THE NEW YEAR.

BY NELL VAN.

"Happy New Year, little one," said mamma, as Amy opened her blue eyes on the first day of the year 18—. "Oh, dear; is it really, truly, New Year's day at last?" enquired the child, springing out of bed and hurrying on her clothes. "Yes, my dear; New Year's day has come at last, and how will this little girl spend the day to make it a happy one to be remembered?" "Oh, I always love New Year's day better than any other day in the whole year, I do believe. We are going to have such fun. Cousin Minnie and Emma are coming, you know; and you will have callers all day, with a big table set out in the back parlor with lots of goodies. I saw cook fix the big turkey yesterday and stick cloves all over the boiled ham before she set it in the oven to brown. And then the pickled oysters and coffee always smell so nice; crullers and mince-pie, besides nuts and candies, cake and wine, and everything nice. Mayn't we have a little table of our own set out in the basement, and have Ralph and Johnny and the other little boys come in to call? And Mayn't I wear my blue dress and sash all day long without any apron to hide it? and twist up my hair with a comb so as to look exactly like a big lady?" "One question at a time, Amy. You know I will be busy in the parlor all day with company. I shall therefore dress you this morning in your blue dress and sash, but you must wear a big apron till your cousins come, when the house will be thoroughly warm. You cannot wear your hair in a comb; it will spoil your curls, which are becoming to a child of your age. Not crying! Fie, Amy! for shame! To begin the year with tears! Looking up through her tear-dimmed eyes the little lady said, poutingly, "When I am a big lady and you are my little girl, I'll never make you wear big aprons; you see if I do." "Why, Amy child, do you suppose I can grow into a little girl again? Do you forget that I was once your grandma's little child, just as you are mine?" "But, mamma," persisted the child, "I heard the minister say once something about folks being born again and becoming like little children before they could die and go to the good place. Of course you'll be my own little girl then when you get born again. Who else could I love as well as you my dear, dear mamma?"

The door suddenly opened and Amy's father entered with a laugh, saying: "That's so, Amy darling, who else could you love as well as dear, dear mamma? You are both my little girls now, so I'll toss one upon my back and tuck the other under my arm, and away we'll go down stairs to see grandma and the pussy cat."

Mr. Burchard was a successful New York merchant. His home was located in an aristocratic quarter near Gramercy Park, and he was one of the very few whom prosperity did not spoil. Amy was an only child, tenderly reared yet well governed. She seldom rebelled, though exceedingly active, and usually strove to please her kind parents and grandmother. New Year's day in New York City is given up to the good old Knickerbocker custom of giving and receiving calls. From morning till night gentlemen may be seen paying their respects to lady friends, who honor the occasion by appearing in holiday attire and offering the compliments of the season in a glass of good wine. Mrs. Burchard was young and lively. Her husband being fond of society they entertained a deal of company, and were capable of exerting an influence of which they seemed wholly unaware. The moderate use of the social glass among friends was by them considered unobjectionable, they holding that temperance truly meant keeping the appetite at all times within bounds, Judging only by their own standpoint, they little knew the false reasoning this was to one with perverted tastes.

But two return to my story. The two cousins had come, and Amy was in an ecstacy of delight. New books were added to her store of presents, and her indulgent mamma had given her permission to keep open house on her own account in the basement dining-room. Ralph and Johnny had been notified, and they were to tell the rest of the lads in the row to call on Amy and Minnie without fail.

Just before noon a small group of young men entered Mrs. Burchard's beautiful home, among them Charles Mallory, a fine-looking youth, who knew well his one great failing, and had times of manfully struggling against it. It was an inordinate love for liquor. The smell of wine was delicious to him, and he had that morning inwardly resolved not to taste one drop of anything stimulating. He even denied himself the pleasure of accompanying Jack Burton and a couple of congenial friends in a carriage because he feared the result. And here at the outset he was met on the steps by Foster and two young Southern bloods. They entered together, were introduced to Mr. Burchard's pretty neice, and he found there was no resisting the urgent solicitations of his kind hostess, who said entreatingly: "You surely will not refuse to drink Miss Emma's health in this harmless glass of sherry?" The same old story, thought Mallory. He said aloud: "Pray excuse me, madam, the day is scarcely begun, and I have many calls to make. A first glass often paves the way for more, and I begin the year with good resolutions, which you should help me to keep." Don't preach temperance on New Year's day, Mallory," cried Foster, thippantly; "you'll be putting away the egg-nog at Mrs. L.'s by-and-bye without a qualm of conscience; see if you don't; eh, Charley?" "New Year's comes but once a year," said another, bowing, while another looked indignant at this breach of etiquette in thus openly declining the hospitalities of the fair hostess. "No, we can't excuse you, Charley," said Foster: "you are always in the dumps till you get a glass of wine," he whispered. "Come on." Thus importuned, was it any wonder that good resolutions were cast to the winds? The whole party clicked glasses and drank to the health of the ladies.

There was silence for a few moments after they had left, and Emma remarked upon Mr. Mallory's reluctance to take wine: "Yes, poor youth! he bids fair to follow in his father's footsteps. *He* always took wine with his dinner, and several glasses a day besides, and died a victim to delirium tremens. His son inherits the same taste for drink, and though he tries hard to break up the habit he invariably fails, as you saw him just now. Why, aunt, don't you help save him, instead of urging him to drink? And to *my* health, too! I could have cried with vexation." "But, my dear," said the worldly aunt, "what am I to do when society demands that hospitality consists in offering cake and wine to our guests on certain occasions?"

More visitors were announced, and the incident of the morning was soon forgotten. The smell of burnt clothing came up from below. The cry of "Fire!" was heard; the rush and hurry of many feet, and loud voices of men. A carriage conveyed the ladies and children to the nearest hotel. It was impossible to imagine where Mr. Burchard could be found, so little Amy could only content herself by sitting at one of the long windows of the hotel watching for him to pass that way. Fancying she saw him, she begged leave to go with her cousin to the door; but it was not he. A neighbor's boy passed on the other side of the street, and beckoned Amy to come over. "I'll be back in a little minute, Minnie," she said, skipping away. The boy promised to find her papa for her if she would go with him; but stopping at a fruit store to buy some peanuts, Amy wandered on alone, saying to herself, "I know I can find my papa alone. I know him better than any one." The boy, supposing she had gone back to the hotel, took no notice of her absence; but Minnie strained her eyes to catch a glimpse of the little blue dress of her cousin, but in vain. She returned to the parlor to tell the tale of Amy's new exploit. "Gone to find her father! Impossible!" exclaimed the terrified mother starting to her feet. "Go, somebody, and bring back the child." "She is safe with Willie Jones; he will let nothing harm her, and she was well wrapped up, you know," said Emma, tenderly. As the day wore on and Amy did not return, more than one anxious heart throbbed with impatient suspense.

In the meantime, how fared the young wanderer? Worn out with fatigue, she sank crying upon the steps of a dwelling. "Poor little dear," said a kindly voice, and looking up she saw bending over her an old gentlemen with glasses, who enquired her name and where she lived. "I'm Amy Bunch, sir, that's what they call me; and I live on—oh, I don't live anywhere, 'cause our house was afire and we went away, and I can't find my papa to tell him about it." "Who is your papa, child?" enquired the stranger. "He is only papa, and mamma calls him "idea." "But what is his name? and does he keep an office or a store?" "Oh, I don't know, sir; he only goes down town, and to-day went out to make calls. Oh, *dear*, what *will* become of me? I want my mamma and papa so bad." "Come with me," said the stranger, kindly, leading her to the nearest station, and begging the officials to see that the lost child was restored to her parents went his way. As night came on, the unclaimed children, of which there are always a number, were sent to the Foundling's Home till they should be found by their friends. Among a crowd of little ones Amy was placed under the kind guardianship of Mother Bond, who enquired their names, gave them some supper and clean beds to sleep in; but Amy could not eat, and wept herself to sleep.

We must now pass over a period of six years, during which time the sad-hearted parents had exhausted every means for discovering the whereabouts of their darling, except that of visiting the Foundling's Home. From time to time children were apprenticed out from the Home till they should become of age.

When good Mrs. Mallory sought there a nurse girl to mind her baby boy, she selected Amy from the rest, and as the child's early answer to the question, "What's your name?" was invariably, "I'm Amy Bunch, ma'am," her name was put down on the books as "Mamie Bunch," and as she grew out of childhood she was called "Mary."

Any change is grateful to the young, and their hopefulness colors the future with rainbow tints. Mary was glad to leave the Home after the good-byes had been said, for the big world outside the walls of the playground seemed inviting. Her early life was shrouded in mystery. She had a faint remembrance of a life amid luxury; downy beds and soft cushions; dainty carpets and fine pictures; books, toys, and of being petted and caressed by kind, loving parent. She could remember a day when all this ceased, and then a blank. Poor child! She was now riding with her new mistress in the capacity of child's nurse, and was to be taught to make her way in the world like many another of gentle birth.

It has been said "There is a skeleton in every home," and the time came when Mary was to discover the one in the Mallory household. Intemperance, like a grim spectre, haunts the earth, deluding its victims and blighting innocence with its foul and loathsome breath. The youth who strove to resist the tempting glass in Mrs. Burchard's parlor that eventful New Year's day, from that hour lost command of his appetite. He married a simple-hearted girl of inferior position, and her invariable excuse for his one great failing was: "He is only like other men, and there is always a something." They sat one evening, her mistress and Mary, watching beside the crib of the sick child, when loud noises were heard at the hall door and an angry voice demanded admittance. "You sit here, Mary, and I'll go," said Mrs. Mallory. Poor Mary, trembling with fear, said within her heart, "What dreadful beings men are! I'm almost glad I never knew my father, for fear he was like the rest." Hurried steps were heard approaching, and the loud voice said: "Where is the brat? It has stood between sin and I long enough, and this will end it now and here." He rushed into the room brandishing over his head a long knife. With sudden presence of mind Mary sprang to the crib, and lifting the child in her arms with its blankets about it she rushed through the open door out into the night air, and ran she knew not where, till overcome with fatigue she fell and struck her head against the curbstone. A crowd collected, and the girl and her sleeping burden were carried into a house, where a physician was sent for. Stunned by the fall, it was some time before she recovered herself. When she opened her eyes they met those of a lady who sat watching beside the lounge. Her soft white hair was banded back from her brow, and her countenance expressed sympathy. There had been a trinket, which Mary had always worn on a gold chain around her throat ever since leaving the Home, when the Matron clasped it there and told her it was the only link between her and her mother. This had snapped and fallen to the floor as they brought her in, and her first impulse upon returning to consciensess was to put her hand to her throat. "Here it is," said the lady, tenderly; "how came you by this?" "Oh, ma'am," sobbed Mary, "I had a mother once, and this is all I have left. Where's baby? Did it get hurt, too? Oh, but my poor mistress will be wondering where I am." "Tis Amy! Oh, come, father, see! Our lost child has come back to us! The old child-lish look is in her eyes! Poor dove! She has flown from the persecutions of the drunkard I in my blindness helped to make, straight into the old home nest!"

W. D. F. Richards of Ventura county, realized $6,500 on 200 acres of flax, or $32 00 per acre.

Correspondence.

Letter from Lompoc Temperance Colony.

Editor Agriculturist:—I am a close reader of your valuable paper, and have not seen anything from this section of late. I said "valuable" paper, but hesitated about using so hackneyed a term. But I speak it conscientiously. Your columns do contain such varied, reliable and instructive reading matter, alike for the farmer, his wife and his children, and the moral tone is so sound and strong, without any whining or cant, that I feel free to use the word "valuable" advisedly. In this "Temperance" Colony your paper is, and ought to be, appreciated for the noble stand you take against advocating, countenancing or advertising intoxicating liquors as necessary to the public good or as any part of so honorable a calling as agriculture. God speed you, say many of us, in your denunciation of those who prostitute what should be useful Agricultural Fairs into gambling, horse-racing, pool-selling, black-leg institutions. I am truly glad to see you and other agricultural papers advocating the drying of grapes for raisins, making of syrup, jellies, etc., or even feeding them to hogs, instead of making of them liquor, the curse of our age and country. I must think you are thus doing the State a substantial service, and not less the grape-raisers than the consumers. There must be a great and increasing demand for all dried and preserved fruits. Take new territory like this, filling up so rapidly; until our trees and vines bear sufficient for home consumption we afford a good market for green, dried and preserved fruits. I often wonder that those who produce these wholesome and desirable srples do not communicate with some merchants, or grangers, and supply, *direct*, the community, without first selling to San Francisco merchants, from whom the local storekeepers of each community must buy, at an increased cost to the last, the retail purchaser.

We are raising an immense amount of produce in this valley, beans, potatoes, pumpkins etc. being the principal. Considerable grain was put in and did well. Fruit trees are making a vigorous growth. Special attention is being paid to hog raising. We can raise ample food, and the climate just suits for making bacon. They have fetched a fine price, seven to ten cents, on foot, to those who were fortunate enough to have a stock to sell to others who were determined to have a start in these prolific and profitable animals. A good deal of our fine dairy land is sold and settled. We have a continual influx of new comers, which "astonishes the natives" of surrounding places, especially those croakers who boldly asserted, and were anxious to "bet money" that it would be impossible to keep out saloons and the sale of whisky, and who confidently predicted the valley would never settle up, nor the town amount to anything without liquor selling. If Lompoc be a failure I would rejoice to see a thousand such failures in our glorious State to-day. We are not without our misfortunes. We had a touch of potato blight, but we were worse scared than hurt by far. The most of people will hold their potatoes for a higher price. The elements have been against us. During a recent northwest gale a considerable portion of our wharf was moved off bodily, as the flooring was spiked down hard and fast on to the piling, which proved not to have been sufficiently high. The experience is rather expensive, but it is hoped that the repairs will stand, as we have abundance of long piling to raise the floor above the reach of the upward pressure of incoming waves. The workmen have already commenced repairing. The large warehouse is about completed, and is filling up with produce awaiting shipment and good prices. We still load schooners at the part of the wharf remaining, which runs out about 900 feet, I understand. We have had no rain yet to damage anything. If plenty comes hereafter it suits us best, as it gives us a longer season in which to harvest the large crop raised. A company has just been incorporated for the purchase of adjacent ranches, for the formation of another temperance colony, to be called "New Vineland." If it be fully launched, I have no doubt your advertising columns will give information in general, and tell where all details can be ascertained. Elder J. W. Webb, well known as a leading spirit in Lompoc, and a public worker in the temperance cause, is President, and Charles Maltby, formerly Revenue and Indian Agent in California, is Secretary. In the Los Alamos Valley a large amount of land has been leased to farmers at very reasonable rates. All this country will be settled up ere long. I hear the "College Grant" is being surveyed. I do not think of further items of interest, and this letter is, maybe, too long already. Respectfully,

J. W. W.

Lompoc, December, 1876.

Growth of the Lompoc Temperance Colony.—Says the *Record*: In November, 1874, the Lompoc rancho, where now is centred near fifteen hundred inhabitants, was a common California sheep or stock ranch, known only to the stock men of the State as a superior grass producing region and occupied by some thirty or forty thousand head of sheep. Since that time the major part of over 46,000 acres of the finest valley and hill lands in the State have been sold to four or five hundred different persons, mostly heads of families, who are either here or intend coming as soon as convenient, in tracts to suit their means, and on the installment plan which enables the poor man to work out his salvation and secure a home. In two years and a half our colony will have built three school edifices, one costing over $5,000, affording school facilities for over three hundred pupils as per last report of Census Marshal. The business of the colony has grown to quite respectable proportions. Five mercantile houses, a drug store, livery stable, two blacksmith and wagon shops, one furniture store, two tailor shops, one shoemaker shop, two hotels, two confectionery establishments and postoffice and telegraph, two lumber yards, and parties now among us intending to open in trade soon as suitable buildings can be erected. Our people have made many fine improvements, such as erecting tasty dwellings, etc.

TRIAL OF SEEDS SENT OUT BY THE AG. DEPT., WASHINGTON.

Lompoc, Nov. 27, 1876.

Ed. Agriculturist:—I have to-day sent a report to the Clerk of the Agricultural Department of the seed you gave me. The bearded spring wheat was very productive; 100 lbs. from a quart The Chevalier barley, light, 55 lbs. The white oats, good, 55 lbs. from the quart. The Turban squash, splendid for pies, too dry for baking. The large *smooth* tomatoes, a mistake. The cantaloupes, watermelons, beets, etc., good, but not superior to those already used.

Yours Truly,

Irving P. Henning,
Sec. L. V. P. Co.

Saratoga, Nov. 24th.

Friend Herring:—As was promised, here is the report of the planting, growth and final result of the seeds obtained through your office last season. The first planted were the peas, McLean's Little Gem and the Philadelphia Early. I can recommend both these as being tender and well flavored; they are both prolific bearers, the first named being about ten days earlier than the Philadelphia Early. They received no irrigation. The silver-skin onion proved to be small and very mild. The cauliflower (Asiatic) seed came up slowly, the plants grew reluctantly, and died after transplanting; were well watered and cultivated. I am not at all acquainted with the nature and habits of this plant, and treated it the same as I did cabbage. Was that right? [Yes—Ed.] The black wax bean is a sturdy plant, and the beans are good either green or dry. The brown Valentine beans were received so late I did not plant them. Will report on them next season. Of corn, I had two varieties, Stowell's Evergreen and Early Minnesota. Of the former, a little came up, but did not amount to much. The latter did not make its appearance above ground. Both these varieties were well spoken of in the Eastern papers a year or two ago; but judging from the appearance of the seed I had, it was not fully ripe. Of cucumbers, there were the long green Spine and early white Spine. The last mentioned did not germinate at all, and the birds pulled the others up almost as fast as they showed themselves. The melon seeds, of which there were the Orange watermelon and Pineapple muskmelon, did not come up. The seed was very light. The Boston Marrow and Early Bush squash came up and did well. The Early Bush is good and tender, but must not remain a day too long on the vine, or it will be too strong. I had Cook's Favorite and Improved Trophy tomatoes, and can speak highly in their favor. Cook's Favorite is smaller than the Trophy, but is smooth and fully as well flavored. The vines are still full of fruit (Nov. 24th), but the cold weather allows it to ripen so slowly that it is rather insipid. We are obliged to contend with birds and rabbits to such an extent that unless everything is planted close by the house, it does not amount to much. I was obliged to do all the planting and cultivating this season, and as I was a perfect novice at such things, perhaps I was partly the cause of such ill success. Next season I hope to do better.

E. L. Hoppell.

Let it be remembered that the finer we make the soil, the nicer the bed in which to put the seed, the easier and faster the plants can obtain their food. The more we cultivate the soil the finer we make it, and the faster our crops grow. This principle we ought to understand and apply, since it lies at the foundation of economical and successful cultivation.

"Funny monkey," said Mrs. Partington as she saw him patiently sitting, "but he sets as if he had the plumbago in the back, and I could wish there was more hair on his reprehensible tail. I cannot yet believe, neither, that they're our postcrity."

Apiary.

Bee-Keeping in Southern California.

The California bee season, Mr. Harbison says, begins by February 1. In March or April the bees swarm, and the bee-culturist has lively times in saving the swarms. The science has become so systematized now that the apiculturist knows within a day or two when a given hive may be expected to swarm, and as the young bees always settle somewhere near the parent hive at least once before selecting their new quarters, a swarm is seldom lost. The flowers are at the height of their luxuriance in May and June, and the taking of honey is begun usually about May 20, and the bees are kept at work as long as the flowers last. They cease to bloom in sufficient quantities to more than subsist the bees in the early part of August; but the little workers are able to find enough to live on without consuming their stores as late as October. It will thus be seen that the harvest time is never longer than three months, and is often much less. After October begins, although the air is still mild and spring-like, the bees cease to work, and retire into a semi-dormant condition. Once every eight or ten days a colony will turn out at midday and fly around for an hour or two in the sunshine, but they never fly far from the hive, and are never seen at work.

The food of the bees in the bee belt is generally the flowers of the white sage, a plant that closely resembles the garden sage. This is not to be confounded with the sage brush of Nevada and Utah, which is of the wormwood species, and has the family bitterness. Next to the sage in importance as bee food is the sumac, a shrub that grows in California without poisonous quality. In fact, there is no poisonous flowering plant in the bee range, and the honey has none of the colicky qualities that make Eastern-grown honey objectionable. The honey is graded by the culturist according to the plant from which it is derived. That made from sage flowers being clearest and most aromatic, is most valuable.—*New York Sun.*

Bees In California.

Moths have been a source of annoyance in our apiary for years, having lost many stands by their ravages. Mice, lizards, spiders, etc., have sometimes obtained possession of our hives, but such will not be the case in the future. Moths are not going to be tolerated as heretofore; more care will be observed in watching the hives, and every precaution will be used to avoid their being in the hives unmolested; also so of spiders, toads, &c.

We consider it pure negligence to lose a stand of bees in this state by starvation, moths, etc. As for us, we never took a hive off the summer stand to protect it from the rain, frost, etc., for the winters are never so cold as to freeze the bees. The only protection required is to keep the water from entering the hives, which would cause the combs to mould, and if any litter should have accumulated on the bottom board it would become decayed and would cause disease. It is a rarity here for dirt and dead bees to remain for any length of time inside the hive if the stock is in a strong condition and it is well to always have the hive well stocked with inmates, (not moths and other vermin,) for when so

kept bees will see that the inside is clean. Although it is a common custom in the northern part of this State to leave hives unprotected, we strongly recommend a neat, cheap, and durable covering, to protect them, not so much from the rain, etc., of winter, but more from the heat of summer. We find that hives placed in a cool location, the bees do much better than those that are exposed to heat. —*U. K. L., in Bee-Keeper's Magazine.*

A Few Words from Southern California.

I feel as though I must enter my protest against some of the sweeping assertions made in the July number, by R. J. Colburn, of Chicago, in regard to the bees and honey of Southern California.

After giving to that section the preference as the greatest honey-producing country of equal area in the world, he says: "I am further satisfied that its distance from good markets, and liabilities to the disease known as 'foul brood,' as well as ravages from the moth, may reduce the high estimate some people have of it." True, we are quite a distance from market, but we cannot always get producers and consumers together. California wheat is the best the world produces, and it pays to ship to Europe; that may yet be the best market for honey; and at paying prices too. Then, the yield of honey is so abundant here, (in good seasons) and our losses of bees so small, that we can as well afford to ship our honey to Chicago or New York, as those who live nearer, and lose from one-quarter to three-quarters of their colonies every winter. As to 'foul brood,' it is something I know nothing about, never having seen any of it, nor met with any one who has in Southern California; but I have *heard* that there was some of it in Los Angeles county; and I am of the opinion that it will be found (if found at all) on low, wet lands, or near wine vats. I often hear the remark, that the two great drawbacks to successful bee-culture in the "States" we do not have to contend with here – foul brood and wintering.

As for the moth, occasionally we find a worm in the hive, but not often; and I believe, with Mr. Langstroth, that a strong colony, with a prolific queen, need never fear the ravages of the moth; but a queenless one is almost sure to fall a prey to them here or elsewhere.

Again, he says: "In regard to the quality of California honey, it seems to be the opinion of every person who has tasted it, with whom I have talked, that it cannot compare with our white clover, except in looks, 'Novice' to the contrary notwithstanding. But its looks sells it." There is quite a difference in the quality of honey in different localities in Southern California. In the neighborhood of Santa Barbara—where we lived five years, and had some experience with bees—the early honey, gathered largely from alfillarilla (filarei—commonly called) is very fine; but the late honey gathered from the "tar-weed," mostly, is dark in color and strong in flavor. The eastern part of this county, where there is abundance of white sage and sumac, produces as fine honey as the world ever saw. The early honey is equal to that gathered in Santa Barbara county, from nearly the same plants; and the later, gathered from the white sage, I would venture to place beside *any* white clover honey to be found by *any* bees in any State in the Union. It is clear as water, thick, and of a flavor to tempt—mortals. Apiarists, who have kept bees east of the Rocky Mountains, and in California, give the palm to the white sage honey above the white clover. The honey gathered from the sumac—not the eastern sumac—I *think* is not quite so light-colored, though it is hard to determine, as it commences to flower before the white sage is gone. The white sage harvest commenced about the third week in May and closed about the middle of July. The sumac commenced to flower the middle of June, and closed about the third week in July. I have conversed with those who have been in Los Angeles and San Diego counties, and they say that the white sage grows in great abundance in most of the mountain regions; so, I cannot but believe that the bee-keepers there get just as good honey as we do. I saw a statement in the *Bee-Keepers' Magazine*, several months ago, that a large shipment of honey had been made from California; but it was of inferior quality, and would probably remain long on the market. I understand that that honey was gathered in the neighborhood of Sacramento—how near I know not—on "tule" lands.

Now, it may be, that those persons who passed judgment on California honey, "tasted" of this honey; if so, according to all I hear, the taste of it must be in their mouths yet. I do not want to see California honey condemned on account of it, either. I am satisfied they never tasted white sage honey, or they would never say "its looks sells it." I am sorry to see in G. F. M.'s communication, in the August number, that most bee-keepers in this locality are losing money. Such is not the case here; and I do not "think the whole business overdrawn." A person cannot go into the bee-business in a comparatively new country, like this, and *live in the city*, where his family can have all the advantages of society, and make money. If he wants his bees to gather the best honey, he must *go where it is*, if it takes him to the foot of a mountain, or up a canyon. If he is able to keep his family in town, well and good; if not, let them share the hardships and deprivations, and get rich, (and I believe they will, if they stick to the business here) then move to the city and to society. Land in this or Santa Barbara counties does not have to be irrigated to produce a crop, but if well farmed produces splendidly.

We started in this year with 80 colonies of bees in the Langstroth hive; have taken off 850 boxes of honey, averaging 5½ to 6 lbs. each; shall probably take off 50 more. Have not got through extracting from the lower part of the hive, but have averaged over 33 lbs. to the hive as far as extracted. We have increased 89 colonies. That will make about 1½ tons extracted honey, and over 2¼ tons box honey. If this is a failure, I hope I may never make a worse one.

This has been a very poor season, not having any rain since January 6th, to amount to a shower. We had a frost in April that did considerable damage to the bee pasture, and a dry, hot wind the 9th and 10th of May that dried up the flowers to such an extent as to nearly stop the gathering of honey, and the bees tore down all their queen cells. I have already made this letter too long to be acceptable, I fear, so will close.—*E. G. K., Ventura County, Cal., in American Bee Journal for December.*

How to Fit Empty Combs into Honey Boxes.—Take the combs carefully from the frames and lay them on a folded towel, as in transferring; cut into pieces a little larger than the box, slide and crowd them carefully into it. Put in the glass and set the box over a strong colony whose hive is filled with honey. The bees will fasten the pieces nicely in a short time, if it is done while the weather is warm.—*American Bee Journal.*

PHOSPHORUS WHEAT TO DESTOY SQUIRRELS.

An Easy Way to Mix and How to Use.

Mr. H. G. Batty, of Milpitas, the Squirrel Inspector for that district, furnishes us with his way of preparing and using phosphorus poison for squirrels:

Take a five-gallon square kerosene can; cut out a side, clean it; punch a hole in each end of can and tie in rope for bail. This makes it convenient to carry, and it is the best handy vessel for the purpose that I have seen. Fill can to depth of half an inch with boiling water; add one-half teacupful hot syrup, and one full stick (or more) of phosphorus. Mix to a thick gruel with middlings or graham flour. Add your wheat now, a quart at a time. Stir well until the can is full as is convenient to mix. If it is too sticky, mix until dry with middlings or graham, till the wheat will scatter when thrown in front of the holes. I have poisoned for the the last six years with success in this way. A tablespoonful at each hole, scattered, is the way I use it. My stock has run in the field all the time, often a hundred head, without the least injury. By *scattering* the poisoned wheat, stock cannot pick it up, and the squirrels will eat it better. Few few squirrels will be found dead outside of their holes. I have seen fields that were alive with squirrels when the phosphorus wheat was put out, and the next day hardly one was to be seen. We think that this is the cheapest poison to use at this time of the year. I have had greater success with it than with Wakelee's poison. In handling the phosphorus in the stick, be very careful to keep it covered with cold water. A good, safe way to keep phosphorus is to set the can in another can filled with water, away from any building. In mixing, do not inhale the smoke. We prefer to mix in the open air, setting the can on hot bricks or stone covers will tend to keep it warm while mixing.

We invite further reports upon this subject. We approve of Mr. Batty's way of preparing the phosphorus wheat for poisoning squirrels; but we wonder that he has not poisoned stock by scattering it outside about the holes. Sheep or hogs would certainly be in danger to run where phosphorus was thus scattered, also birds and game are likely to be poisoned. We once saw, in Salinas Valley, dozens of hogs lying dead from poison, by eating the dead squirrels poisoned with phosphorus. The squirrels were poisoned in an adjoining field, and went for water into the enclosure where the hogs were running. We think a word of caution here necessary, and would advise throwing the poisoned grain into the holes, out of the reach of other animals, birds and game.—Editor Agriculturist.]

ARTESIAN WELLS – STRAWBERRIES.

The lands lying between San Jose and the bay, within the artesian basin are fast being converted into vegetable and fruit lands. On lands where water has to be raised by wind, horse or steam power, above the artesian basin, the culture of such fruits and vegetables as require a good deal of water, has yearly contracted. An abundant supply of artesian water on lower lands has so cheapened the cost of production that competition on lands where water has to be supplied by power, with much profit, is out of the question. The average depth of good flowing wells is about 200 feet, although the range is from 60 to over 500 feet. The general charge for boring is—

First one hundred feet	.40	Cents per foot	
Second "	"	.65	" "
Third "	"	.90	" "

And so on in like proportion. The cost of seven-inch—the usual size—is seventy-five cents per running foot (double). This would make a 200-foot well cost $315 complete. A 500-foot well costs $1,500, or more if the pipe has to be renewed. These figures we take from Mr. Geo. Byron, of Alviso, who has just completed a 200-foot well, which will supply a large plantation of strawberries. The artesian region is *the* strawberry field of California. Several large, new plantations are being set out this season. The finest berries in the State are grown in our valley.

Cheap Storage of Tools.

A few years ago, in company with several brother farmers, I visited one of our State premium farms, located in this (Knox) county, Ill. Among the many things worthy of commendation, was his cheap and simple store-room for farm implements, which stood a few rods from the barn, away by itself in the corner of a grove of young growing timber. Posts were set in the ground on the back side some five or six feet high. The front posts were some two feet higher, and the room was about 12 by 20 feet. The roof boards were matched and battened; the side boards of common stuff. The floor was made of loose boards. The door was 8 feet wide and 4 feet high, hung with heavy strap hinges on top, all safe against snow, rain and sun. Here were his reaper, mower, roller, wire-tooth hay rake, watking two-horse cultivators, (riding cultivators out of date), harrows, plows, and room for a sled and cutter during the summer. The hen roost was in another building—none were allowed there day or night. Here, at an expense of 600 or 800 feet of course lumber, a few pounds of nails, a set of heavy strap hinges, and one day's work in putting up the building, at a total cost of about $15, he had all that was necessary for the object desired.—*C. G. T., in Country Gentleman.*

Benevolence at a Discount.

In our views of things, whatever has a directly beneficial influence upon the physical health of people should not be hedged in by iron-bound restrictions, so that they who would try to adapt it can not unless they submit to the exactions of the monopolists. When we meet with a paragraph like this in a periodical of general circulation,—

"Patterns are not for sale All these garments are fully covered by patents, and infringements will be rigorously prosecuted by law."

—with the fact before us that this cast-iron policy relates to an improved method of dress for women by which comfort and movement are promoted, we are inclined to believe that the persons who maintain such a policy in business would bottle up the atmosphere if they could, and institute legal proceedings against all found uncorking it without having previously bought the privilege of doing so.

Our habits of thought and business may be all wrong in the matter, but we have always believed that in things of so much importance as the preparation of

food and the construction of clothing, it was a principle of duty and benevolence to give as wide circulation as possible to methods—new or old—which will tend to promote health. We supposed that, in the matter of "dress reform," all its advocates were philanthropically inclined, but the paragraph above shows how easy it is to mistake, and that some people, who have a "good thing," will obtain a government privilege for its exclusive sale. Doubtless "there's money in it."

Thus justly says the *Phrenological Journal and Science of Health*, referring to some eastern reform under-garments. Now, be it known to all good people, that the C. C. C. Company of San Francisco, have *better styles* of reform underclothing—the invention of a philanthropic California lady well known to the editor—and they offer to sell patterns to everybody. They also manufacture to order, when desired. See advertisement in this issue of the Agriculturist, and profit by it and be happy. Benevolence *not* at a discount in this case.—[Ed. Ag.

Imaginary Sorrows the Cause of "the Blues."

The old story of "The Smoke House," is thus put into rhyme by Mr. H. H. Tuttle, of San Jose.

An old lady sat at the smoke house door,
While she wept, as women have wept before.
Her husband came, with a heavy heart,
Real peace and comfort to impart.
Says he "my darling, dearest wife,
You've been my comfort all my life.
Lean now on me, your troubles tell;
I'll bring relief and make you well."
At these kind words she raised her head
And heaved a sigh, and thus she said:
"Our Sally dear is small you know,
But large in time is sure to grow;
And married then she'll likely be,
And live the same as you and me.
In time a little boy will grow,
Mark well my word, it will be so;
And full of antics, full of tricks,
His horse he'll play with whip and sticks.
And in this house I now do see
The little fellow, full of glee;
That form you see a swinging there,
Suspended now in open air,
Is falling on his little head!—
My God! dear man, the child is dead!
And into grief the woman flew,
As tho' the thing were real and true.

The Object of Manuring.—The object of manuring is to keep the crops abundantly supplied in available forms with all the kinds of food they require throughout their growth. All our crops require the same kinds of food, although in somewhat different proportions.

Farmyard manure is, and apparently must always be, our stable manure. It contains all the elements our crops require, and is the cheapest form in which the whole of them can be obtained.

More than half of the weight of all plants is made up of elements which the plants get from water and from the atmosphere—the leaves being put out by the plant to absorb food from the air just as the rootlets absorb it from the soil.—*North British Agriculturist.*

Look to the water supply for your stock, see that it is pure and plentiful, and by so doing keep them healthy, and they will reward you for the feed which they consume. See to the winter quarters for your stock, have them well supplied with good food, and so keep your stock in good condition. You will gain by every attention you can pay to your stock in keeping them warm and comfortable.

Household Reading.

[For the Agriculturist.]

DOTTINGS AND JOTTINGS.

BY ISAAC KINLEY.

These sermons in stone: The earth has dagnerreotyped its history on the rock, full of instructive lessons for those who will take the trouble to read.

This little fossil, not so large as a walnut, is a petrified organism that lived, I dare not guess how many ages ago. Buried in its rock-built mausoleum, the deposit of ancient ocean, it has lain under these Silurian rocks for uncounted ages. During long, long years, rolled over it the waters of a mighty ocean. During long, long ages, strange wild beasts, such as live not now on the earth, roamed, and howled, and preyed on one another in a primeval forest. During thousands and thousands of years, this river has been widening and deepening its channel in the solid rock. For unknown ages a race of men whose very traditions have been lost, lived and loved and huuted on its banks. And for an unrecorded time the red Indian roamed the denizen and lord of this wilderness.

A new race of men—a new civilization is here. And is it not strange, almost to bewilderment, that geologic cycles, men, nations, whole races, pass like a figment sway and this mollusk endures?

And I can look upon it, handle it, nay, reason about it, and learn from it the races that far back in the dim twilight of time peopled this primeval ocean.

At creation s early dawn, when matter first assumed organic form, this little stone was a living being—a type, perhaps the highest, of the then existing life, and a prophecy of the higher developments during the millennial ages to come.

I hear of human reason as something in contradistinction and antagonistic to the divine. The power to distinguish the relation of things, to perceive truth, and to deduce cause from effect or effect from cause, is indeed a human power, the crowning one of the human faculties.

Whatever be the nature of truth—call it human or divine—it is a human faculty which perceives and comprehends it, and this clamorous denunciation of human reason is but human stultification. Whatever you know, my reader, whether it be a revelation from God, or of the discoveries of science, you know through your powers of reason, and you could as well disparage the human hand that earns your bread as the human reason that thinks your thoughts.

Reason is the sword of truth, its buckler, and its shield. Distrust it not. Put on the armor and meet boldly the issue.

In the commonwealth of reason property is secure, and action free. No one can say of the deductions of reason or the precepts of truth, "This is my property to the exclusion of my neighbor;" nor to the free mind, "Thus far shalt thou go and no farther." God has given us the vast territory of truth. We have but to explore, and subdue, and it is ours. All known truth is property in possession. All unknown, but knowable, truth is property in abeyance. The mind's dominion is bounded only by the impossible and the infinite.

Save me from those who *know*. When one only *believes*, he is likely to have a reason for the faith that is in him; but if he *knows*, his assurance cuts off investigation, though his assumptions are without a sustaining fact or argument.

But there are those who will believe a positive man without a reason rather than a modest one whose reasons are demonstrations. The dogmatist has followers, and the Mormon prophet builds up a church while the philosopher has only here and there a listener.

Nature lives, and by an innate energy is ever struggling to higher life.

Plants, animals, and the human race itself, grow; not only as individuals, but develop as races.

The works of God are no failure. During the infinity of geologic cycles, from the birth of the first monad, nature's motto has been, "Higher and still higher."

Upward and upward is nature's law, and the history of her march is written in her own vernacular on the rocks, and all who will may read.

Pain, physical pain—struggle as one may, long years of bodily suffering will conquer at last, and, in spite of him, groove the face with lines of agony.

Philosophy is indeed a good thing, and dogged endurance even better; but both must succumb. And though there be not a whit of good in it, one groans through his very resolution to endure.

As sledging gives muscle to the blacksmith's arm; so thinking increases the power to think. He who masters one subject gains thereby in mental capacity and is the more able to grapple with other and more difficult ones. The mind as well as the body needs its gymnasium. All the faculties clamor for exercise.

Drink, if you will—drink deeply—drink to the very dregs the cup of bitterness.

Is it sweet? Is there joy in it? Then fill and quaff again; and when your breath is a pollution, and you have become a putrescence, stinking with moral rottenness, enjoy whatsoever there is of joy in the reflection that all this abomination is your own work—this hell on earth your own creation.

Those persons who are ever suspecting others—who ascribe good deeds to bad and sinister motives; it is their own peculiar devil that inspires. Do not trust them; they will deceive you. Do not confide in them; they will betray you.

"However darkly sin may twine
Its threads around the human heart,
The impress of the hand divine
Can never utterly depart.

And though the taint of every ill
Has marred the spirit with its blight,
Some leaves are pure and stainless still—
On these at times the angels write."

No one is so good but he has some alloy of badness. No one is so bad but he has a trace of goodness. What is bad in another is like unto your badness. What is good in another is like unto your goodness. And you two are similitudes only a little removed.

The foundation of our political edifice rests on the solid rock of political truth—the durable granite of human equality. If we build to this foundation our system will secure equal and exact justice to all, with a resulting civilization such as the earth has never before witnessed.

The battle of liberty is forever being fought. Selfish and dishonorable men there will always be, ready to carry their purposes of personal promotion and aggrandizement at the cost of the rights of the citizen. Always will there be those who, while they shout freedom to the people, will seek to link the chains that bind them.

San Jose, December, 1876.

FAMILIAR TALKS---No. I.

BY LUIP.

"TO TOIL AND TO SPIN."

Looking over a Southern paper not long since, the following passage arrested my attention;

"There are among us now young people who are growing up in that saddest phase of life for the young, "old before their time;" who have to bake and brew, to toil and to spin; across whose fair young brows no shadows should have come, yet their daily lives are harrassed by carping cares and petty anxieties, whose desires are thwarted, whose hopes are baffled and aspirations chilled."

Why should those who have to bake, brew and spin, grow old before their time? Why should household work throw such shadows across their fair young brows? Why should such work be designated as "carping cares" and "petty anxieties" and harrass their lives? Suppose some desires are thwarted, and some hopes baffled, is it more than Northern girls have to bear with? *They* do not become "mere drudges" because they can not have everything just as they wish. Because they must learn to "look well to the ways of their households," they are not looked upon as being ill-treated by Fortune. And if they are girls of good sense, they do not consider themselves mistreated. It was a queer position for the editor of an agricultural paper to assume. He, and those "daughters of the South," perhaps, never heard, or have forgotten that "labor conquers all things," and the motto so often seen—"Labor is worship."

Surely, in most cases at least, the mere fact that one must wait on herself, and others too, perhaps, and learn to do with little, and help keep the home neat and tidy, need not interfere with one's education. True, one may be unable to attend school constantly, and take a long collegiate course when the public school studies are ended; but more really useful knowledge is to be gained out of school than some may imagine. Many of the courses of study pursued in the higher schools and colleges are of no real benefit to those in the humble walks of life. And these grow more in *quantity* every year. Dio Lewis thinks a return to the public schools of fifty years ago would be an improvement. *Then* the child studied the spelling-book, reader, common arithmetic, and the writing-book, thoroughly, and went out from the school with a constitution sufficiently good to enable him or her to work and earn a respectable living, and to attend college in after years, or to gain a good education during leisure hours. Some of the brightest stars in the literary world, and some of the smartest men that ever lived have been self-taught.

But there are two ways of looking at the work that falls to women generally; the American women as a class, I mean, and those especially who have farmer husbands. One is, that duty in itself is a pleasure, and brings its own reward. Another is the idea that some women have that they are fitted for better things than to be, as they term it, mere household drudges. But sometimes the goodman is more to blame than the wife. He is, too often, apt to forget, that his wife is much farther out of the world as

regards society than he is. For him there is the trip to town once or twice a week for groceries or to the post office. And then there is lodge-night, when he is enjoying himself with his friends, she is at home, it may be entirely alone. Then there is such a difference between their works. Every stroke the farmer makes, counts one, in appearance as well as deed. Every day sees new furrows turned, more grain sowed and springing up to tell of work that he has done. And so with everything that he has to do. With the wife it is different. Three times each day the dishes must be taken from the cupboard, placed upon the table, only to be gathered up, washed and put away again. The same floors to be swept, the beds to be made each morning, the clothes to be washed and ironed every week, and patched and darned. It makes no show after it is all done, and if the husband grows careless it is doubly hard; and it is not to be wondered at that so many women seem to have no thought for anything but their housework. That "their lives are harrassed by carping care and petty anxieties," should not be; and it is in the power of every one to remedy it. But of this, I will, with the editor's consent, speak in the future.

ALMOND CULTURE.

For a number of years, almond culture was regarded as a venture in the whole northern portion of California, owing to the prevalence of late frosts, which it was thought must blight the blossoms five years in six at least. The Almond blooms in March or April, and the frosts at that season are frequently quite heavy. But experience has proved that it is the exception—not rule—when the almond crop is seriously injured by Spring frosts.

Extensive orchards of almonds have been planted in this valley within the last five years, and the young trees are bearing exceedingly well.

Through the courtesy of Mr. E. L. Bradley, of San Jose, we took a ride with him to his fine young almond orchard during the harvesting of his first crop. This orchard consists of 2170 trees, covering 10¼ acres of gravelly but rich soil. It is situated near the County Infirmary; was planted in January 1874. The trees were of two years growth in nursery when planted, and are consequently now five years old from the ground. The trees are planted pretty closely—14 feet apart. They will average three to four inches in diameter, and ten to twelve feet in hight, with a finely proportioned form of head. Some of the trees produced three to five lbs. of nuts each; but the average will be about one pound of fine nuts to the tree this year. This is a really good yield for the age of the trees. There is not a finer almond orchard of its age in this part of the State, and we doubt if there is a finer one in the world than this one of Mr. Bradley's. Mr. Bradley's system of culture has been to keep the surface soil clean and light by thorough cultivation. He runs a plow about four inches deep among them; does not irrigate at all, but preserves the moisture that the rains supply for the use of the trees. The roots run deeply, and the growth and healthfulness of the trees show that they have not suffered for want of moisture. Another idea: He has never pruned his trees at all, but let Nature do her own forming of limbs and ballaneing of forms. The results show the wisdom of Mr. B., and of Dame Nature, for the trees are superior to any that have been trained under the relentless knife. There are a few limbs that may be removed with benefit to the tree, but generally, only a slight shortening-in of some leading limbs is now necessary.

We have advocated letting young trees, and old ones, grow without much pruning, and Mr. Bradley's success with his almond orchard is a strong argument in favor of *no*-pruning. It is certain to our understanding that more trees are injured than benefitted by the modern systems of pruning. Had we a young orchard, our prayer would be, Spare it from the professional pruner!

The close planting, is to get a fair sized, well balanced, rather than a very large tree. The object is to get as full a yield from the acre as possible, with the least cost. Trees growing pretty closely together in our windy climate seem to thrive best, as they are sheltered by each other more than when planted at a greater distance.

Next to the public road Mr. B. has planted a row of almond trees only eight feet apart to catch the dust and break the wind from the orchard. This he has also done around a young prune orchard of 2,550 trees set last winter.

In planting Mr. Bradley had holes dug three feet across and as deep, and filled in with surface soil when the trees were planted, scattering the earth taken from the holes over the surface between the rows. His almond trees cost him 30 cts. each, setting out 10 cts. each. The land upon which the trees set cost $120.00 an acre, although it is worth more than that now.

Ten and one-half acres would be

For land.....	$1,260 00
Trees and planting	868 00
	$2,128-00
Call the cost of culture $300 per year....	600 00
Total cost.....	$2,728 00

The nuts raised this year will pay more than the cost of culture for a year. The trees as they now stand will pay as an investment $10 to the tree—that is, they will pay for the next fifty years the interest on $20,000 and the principal besides. This on less than $3,000 invested.

A RETIRED MINER.

Mr. Bradley is not orcharding or farming for a living, but as a pastime. He is one of the few "fortunate miners" who accumulated a pile at the expense of his physical health, by hard work and exposure, and has finally chosen this garden spot of the world for a residence and home. His magnificent mansion in San Jose, erected under his own and wife's direct supervision, shows a degree of taste and good judgment in making a home, as well as the liberal character of the man. Happily, he is one of the few not puffed up by riches, nor vanity but sensible and every-day in thought, sentiment and manner. Would that there were many more of the same sort.

We noticed that his place was well stocked with such animals as he needs, fine Durham cattle, good horses, splendid mules, Berkshire pigs, etc., also the best farming and other tools needed about a farm. His barns are filled with hay, his straw is all stacked and sheltered, and economy worthy of being copied is shown in every department of his farming.

SQUIRRELS.

Mr. B. has had to contend with squirrels bred on his neighbors' lands. They have completely girdled and killed some of his almond trees. He poisons with strychnine in sweet apples. Also catches with traps—the common steel rat traps. These are set in the front of the hole, covered with paper and earthed over, with grains of wheat scattered about. Gophers he fights with traps. He rejoices that there is a law compelling others to kill their squirrels.

DIRECT DEALING.

FROM OUR APIARY CORRESPONDENT.

Ed. Agriculturist:—As bees are quiet and there seem little to say in regard to that industry, and for fear that that little would be out of place in these dry times, I take another theme, and talk of that portion of the farming community who style themselves Patrons, or Grangers. They have just organized a Pomona Grange in this county, and though we know that but few Pomona Granges in this State have met the expectations of their members, we have faith to believe that ours at least will be a success, meeting a want long felt for concentrating the powers of the organization in this county at a single fulcrum and enable us through it to communicate our needs to our fellow workers in the land, and arrange for the exchange of the productions of one part of the State for the produce of another without paying tribute to any one outside of the organization. For instance, some of the upper counties are engaged largely in fruit production, green and dried, while we produce as yet but a small proportion of what we consume. But we do produce *large quantities of honey*, and of a much finer quality than from any other section. Why may not we, through the medium of the Grange, exchange these commodities much to the *advantage of both sections?* I believe we could, and I trust the time is not far distant when the Granges of one county, or section, will make their wants known though some proper channel of communication, and there will be some other section that can fill that want much to the advantage of both. In making these suggestions, I do not claim to advance a new idea, but only that it is one that has not been acted upon, at least with us. Jcs.

Bernardo, San Diego Co., Dec. 17.

Fruit Profits.—Five acres of prunes eight years old, yielded a net profit of $2,000; two acres of Bartlett pears, twelve years old, shipped East, a net profit of $1,300; two acres of prunes dried and packed, a net profit of $900. At the prices paid for strawberries last year, they would net the producer something over $300 per acre; blackberries about $450 to $500 per acre; the plant, which is extensively grown on the garden lands adjacent to San Jose and Santa Clara, will net about $200 per acre; asparagus, also extensively cultivated for the San Francisco market, $200 per acre; grapes, eight years old, from $100 to $300 per acre; currants and raspberries, of which the Santa Clara Valley produces enormous quantities, $300. The cherry crop is the finest in the State.—*San Jose Argus.*

The bust for the Greeley memorial monument was cast at Wood's foundry, Philadelphia. It is of bronze, and of a size proportionate to a figure of about ten and a half feet. The pedestal and base is made of Quincy and Maine granite, bearing a bas relief in bronze, with the following inscription: "Horace Greeley, born February 3, 1811; died, November 29, 1872, The founder of the New York *Tribune*." The entire cost was over $5,000. The unveiling took place last month.

Corn.

To-day the woods are trembling through and through
With shivering forms, that flush before my view,
Then me It in green as dawn stars melt in blue.
The leaves that wave against my cheek caress
Like women's hands; the embracing boughs express
A subtlety of mighty tenderness.
The corn-clopths into little noises start,
That sound anon like beatings of a heart,
Anon like talk 'twixt lips not far apart.
The beech dreams balm, as a dreamer hums a song;
Through that vague warture, expirations strong
Throb from young hickories breathing deep and long
With stress and urgence bold of prisoned spring
And ecstasy of being.
Now, since the dew-plashed road of morn is dry,
Forth venture odors of more quality
And heavenlier giving. Like Jove's locks awry,
Long muscadines
Rich-wreath the spacious forcheads of great vines.
And breathe ambrosial passion from their vines.
I pray with mosses, ferns, and flowers shy
That hide like gentle nuns from human eye
To lift adoring perfumes to the sky
I hear full bridal-talks of brown and green
Dying to silent hints of kisses keen,
As far lights fringe into a pleasant sheen,
I start at fragmentary whispers, blown
Fr m undertalks of leafy souls unknown,
Vague purp ds sweet, of inarticulate tone.

—[Lanier.

When to Paint Your House.—The *Technologist*, a good authority, states that paint applied to the exterior of buildings in autumn or winter will endure twice as long as when applied in early summer or in hot weather. In the former it dries slowly and becomes hard, like a glazed surface, not easily affected afterwards by the weather, or worn off by the beating of storms. But in very hot weather the oil in the paint soaks into the wood at once, as in a sponge, leaving the lead nearly dry and ready to crumble off. This last difficulty, however, might in a measure be guarded against, though at an increased cost, by first going over the surface with raw oil. Furthermore, by painting in cold weather you escape the annoyance of small flies which invariably collect during the warm season on fresh paint.

Population of the World.—But few persons have anything like a correct idea of the number of people in the world, moving around, eating, drinking, running in debt, talking about their neighbors, struggling for life, falling in love, taking quinine, having their teeth pulled, guzzling whisky, chewing gum, wearing out old clothes, trying to make money. In 1870, according to census returns, the total population of the world was as follows;

Siberia, Asia, - - - -	798,000,000
China, - - - - - -	447,000,000
Europe, - - - - - -	301,000,000
Africa, - - - - - -	203,000,000
North America, - - -	52,000,000
South America, - - -	26,000,000

Profitable Crop.—Frank Kleckner reports that on twenty six acres he produced 800 sacks of beans each sack averaging sixty-five pounds. This yeald aggregates one ton per acre and the class of beans produced are quoted at 2½ cents per lb. This brings the returns in gross at $50.00 per acre. The land on which this crop was produced cost less than $25 per acre. What must be the profit to this people another year when all this vast area is farmed judiciously? A climate and soil that will produce in a single year double the first cost of farm lands is certainly an enviable place for the industrious husbandman. The bean crop here reported was not the product of the best land in our valley by any means.—*Lompoc Record.*

Boys and Girls.

The Seed.

The farmer planted a seed,
A little, dry, black seed;
And off he went to other work,
For the farmer was never known to shirk,
And cared for what he had need.

The night came with its dew,
The cool and silent dew;
The dawn came and the day.
And the farmer worked away
At labors not a few.

Home from his work one day,
One glowing summer day;
His children showed him a perfect flower,
It had burst its bloom that very hour,
How, I cannot say.

But I know if the smallest seed
In the soil of love be cast,
Both day and night will do their part,
And the sower who works with a trusting heart
Will find the flower at last.

The Farm and the City.

An old farmhouse, with meadows wide,
And sweet with clover on each ride;
A bright-eyed boy, who looks from out
The door with woodbine wreathed about,
And wishes his one thought all day:
"Oh! if I could but fly away
From this dull spot the world to see,
How happy, happy, happy,
How happy I should be!"

Amid the city's constant din,
A man who round the world has been,
Who 'mid the tumult and the throng,
Is thinking, thinking all day long:
"Oh! could I only trace once more
The field path to the farmhouse door,
The old green meadow could I see,
How happy, happy, happy,
How happy should I be!"

Our Baby.

Do you see our baby,
Sitting in his chair?
Many funny tricks
He plays when there.

Darling little baby,
Oh, so full of fun,
Very soon we hope
That he'll begin to run.

Now sister Rose and I
Must hold each tiny hand,
For our darling baby
Cannot safely stand.

OUR CORNER.

AUNT POLLY'S NEW YEAR GREETING.

JANUARY, the first month, the usher in of another New Year, is here! It always brings a Hppy New Year's greeting. How fortunate it is that the holidays come in mid-winter, to dispel some of the gloom that the storms, winds and frost of Winter always shadow over the earth. How cheerful the smiles are that accompany the gifts, and merry words so freely given by friends during the holidays. Aunt Polly wishes that every day in the year was a holiday, so that only smiles, and good will, and joyful words and looks, and happy faces, could be seen at any time, and everywhere! How happy we should all be then. Well, let us who belong to "Our Corner" have a holiday all this new year. We can make "Our Corner" a happy place of meeting every month, and exchange the gifts of letters and puzzles and joyful words, and let only the sunshine in to show how cheerful we can be. Instead of letting the holidays end with "A Happy New Year," let's commence a year of holidays!

Aunt Polly has lots of presents for all of you, and means to give them to all who write good letters, make good puzzles, and find out the good puzzles. Won't we be jolly! So come on now, every child that wants to be a cousin, and see if your Aunt Polly is not as goood as her word. Try your very best to write nice letters for OUR CORNER, and we will show the older folks that we can make our part of the AGRICULTURIST better than all the rest of it put together.

"Our Corner" goes to press this month before many letters come in. The Editor thinks it rather silly, any way, to take up too much room with our letters, but then, as "old fogy" as he is, he has promised Aunt Polly a liberal amount of space for the present year, and we will fill it, too, wont we? Now send a bushel of letters for next month. Here are the few we have on hand now:

THAT BOY.

I saw him on the street with a cigar in his mouth, and reeling as if under the influence of intoxicating drinks. About ten years of age, with a bright eye and good features, he is a bright lad with very good capacities. What an ornament to society, and what a comfort to his parents when they shall begin to travel the down-hill grade of life—what possibilities are within his grasp!

His father and mother are church-going people in their habits, a blessing is asked at the table, and they partake of communion in the church once a month. Of additional evidence of their piety I am not informed.

The conduct of their son would pain them very deeply if they knew anything of it; but they are in blissful ignorance of his movements of evenings. They know that he is out, but they never dream of haunts of dissipation, of dens of infamy, in which he may frequently be found. Though he is yet in childhood's tender years, he is old in iniquity. Aye, he is able to give expression to language that should burn the cheek of innocence to a blister. At present I withhold his name from the public.

MRS. L. WRIGHT.

A GREEDY FROG.

DEAR AUNT POLLY:—Your "Corner" in the December number is indeed splendid—interesting as well as instructive to us older ones. My neighbor, Mrs. Z, told me such a funny frog story the other day that I am sure your neices and nephews would all like to have a laugh over it too. So I will tell it you, though I wish they might have heard it in her own language, as I did. Did you ever hear that holding a frog in the hands when one has the chills and fever, until the chill stops, will insure a cure? Well, several years ago, she sent one of her two children some two miles in the country for a frog, as her boy was sick with chills. The child brought home five little frogs, one medium-sized and one big bull-frog, in the pail. She set the pail on the shelf in the kitchen until the child should come on next day. About ten at night there was heard such a jumping and thumping among the frogs in the pail! She went to see what was the matter: there sat Mr. Bullfrog in the pail alone struggling with the medium-sized frog half down his throat, trying to make a meal off him. She called for help, and while one held Mr. Bullfrog she pulled young Mr. Bullfrog out; but the five little ones were gone too far down to recover them! Mr. Bullfrog had turned cannibal, and eaten up a whole family at one meal. This is a true story. What effect this glutton had upon the chills next day we did not learn. "JEWELL."

LETTER FROM NATIVIDAD.

DEAR AUNT POLLY:—Not having anything to do, I thought I would drop you a few lines. I will tell you how two of our smart young men went out hunting rabbits and little birds back of Natividad one day lately and got lost, They hunted all day, and night was coming on, and it was getting dark and foggy. It got so dark that they got down on their knees and prayed and bawled forevermore, and shot off their shotguns, and hollered, and got the people of Natividad "skeart," and Gen. H.'s cavalry stayed after them, (it must have been about 9 o'clock at night), and after the cavalry came Capt. J. S., armed with lanterns and cannons. Gen. H. got up in the hills first with his cavalry, (as the hills are only half a mile from town.) Capt. S.'s First Regiment came up in the rear, and the whole command made a halt near by where they supposed the hollowing and shouting came from, (as the sounds were in a deep canyon.) The smart young men saw the lanterns and hollowed for mercy—and kept on shooting. Gen. H. turned his cannon loose and shot in the air, and then they stopped their hollering and shooting. Then Gen. H., and Commander J. P. of the same cavalry, went up to them and made the smart young men surrender—took them prisoners —brought them to Natividad, and sent them home to their respective parients. Gen. H. said that he found C. B. with his hair tangled in the brush, and his companion could not loosen him.

I send my love to all the cousins, and also to Aunt Polly. I wish you all a Happy New Year. Aunt Polly, I have got a pair of doves, the prettiest little things you ever saw.

I am only ten years old. How do you like my writing? One of my friends says she is going to write to you.

BETTIE.

P. S.—Here is one verse of poetry that a little boy taught me to say to my little dog:

I had a little dog,
His name is Nebudcanneczer;
You'd stick a feather in his nose,
And he'd be sure to sneezer.

Good bye, B.

Aunt Polly thanks Betty for her funny letter, but requests her to be sure and not make personal allusions that will hurt any one's feelings. It is easy to cast ridicule upon anyone. But there is nothing meaner than to injure others. We trust our Betty is innocent of such intentions.

ANOTHER LETTER FROM NATIVIDAD.

DEAR AUNT POLLY:—We could not let this day pass without writing you a few lines, as we see that you are publishing letter from the little folks. We are not very smart, as you may think, but I guess we can write just as good a letter as anybody. We ain't got much news to tell you, only that we are not going to have a Christmas tree here in Natividad. The folks here are getting too high-toned, and some are going to Salinas, Gonzales and Santa Rita to enjoy the Christmas trees and trip the light fantastic toe (as school teachers say), and, for our part, we are going hunting goosos to eat New Years. We asked Uncle George to come and eat with us, but he said that Miss —— asked him to go and dine at her dinner party. She was too stingy to ask us to go; but we will get even—we won't ask her to come to our dinner party New Years.

OCK & CHUB.

OUR POETRY.

We had a little dog, his name was Clover,
Fell in the slop-pail, and died all over.
We had a little pig, his name was Jim Brown,
Turned a double somerset and broke his crown.

Aunt Polly thanks O. and C. for their spicy letter, but has had to cut out some of it as a little too rough. Please try to be funny without being rude. There is plenty of room for jolity in this world we live in without being a bit uncouth. Aunt Polly enjoys fun and frolic, but no real good person can admire or enjoy that which is not refined in principle.

YETTA'S POEMS.

Here are two more of Yetta's first poems. Remember, Yetta is only 10 years old, and is going to write better and better till she can make a nice book of poems, with blue cover and gold edges.

MY NELLIE IS DEAD.

My darling, my little Nellie,
His just been laid beneath the earth;
When again I visit the homestead,
No face will greet me by the hearth.

When little playmates together,
We often played upon the green,
She promised me when older,
To be my pretty little queen.

But alas, my darling Nellie,
Will never, never be my bride,
And when my time for death comes,
Ill ask to be laid by her side.

There was sorrow in the household,
When my poor darling Nellie died.
Her father and mother were anxious
For her to live to be my bride.

TO MY BROTHER WHO HAS COME BACK.

Brother, since you came back,
How happy we all feel,
To have our brother beside us
When in prayer we kneel.

Dear brother, how sad you made us,
When you fled from your parental wing,
I know you sought for employment,
And to merit the honor of a king.

But many years must elapse, dear,
Before you will find such honor,
But while you are young be content
At your father's store on the corner.

To grow up good and honest
Is better than all king's wealth;
I hope you'll have a happy life,
And with it childhood's health.

LETTER FROM SALINAS.

DEAR AUNT POLLY:—This is the second time I have written to you. The last time I wrote a short letter; this time I will try to do better. It is now drawing near Christmas. My little sisters and brother and I expect to have a good time. I hope you will enjoy Christmas and have a good time, too. Dear Aunt Polly, I hope you are getting stronger now. The last time I wrote to you, you were sick. I enjoy to sit and read the "Corner," when the AGRICULTURIST comes. I am going to send 50 cents to get the chromo called "The Refreshing Surprise." Don't forget our address, Salinas City, Monterey Co., California. Aunt Polly, I cannot think of anything more to say in this letter. I will try to do better next time. I am still ten years old. I hope I will see this letter printed in the AGRICULTURIST. I have blotted this letter very much, but I guess you can read it. Please excuse the blots. Mamma has lots of turkeys and I guess we will have one for Christmas. My

father is waiting for the rain to come, as he has a large farm to cultivate. I was trying to make out some of the puzzles, but I cannot. I remain, as ever, your neice, Annie Williams.

December, 1876.

LETTER FROM LIVERMORE.

Dear Aunt Polly:—I am not much of a letter-writer, but I do like to make puzzles, and guess them too. The answer to Fannie Barkway's enigma is, "The Consolidated Virginia;" to Yetta's, "You are Extremely Handsome." I would suggest that she change the first Y to U. The answer to the square puzzle is, "John Underwood, Andover, Massachusetts." It is not original—I have seen it before. I send an enigma.

Tom Clark.

PUZZLES NOT ANSWERED.

Chromos have been sent to Tommy and Mary Clark, for puzzles which they sent to Aunt Polly which none of our little cousins could answer. Any others who have sent puzzles that have not been answered, or who are entitled to chromos, should send for them at once. Aunt Polly wants every one of the cousins to work for these premiums, and to get what they are entitled to.

A GREETING FROM THE EDITOR.

Dear Children:—The Editor has so many pressing cares that he hopes the children will excuse him if he doesn't write much for their department. But as Aunt Polly has at our expense got a fine picture of herself engraved for this New Years number, and bids you all such a nice "Happy New Year," we thought we would get our artist to make a real nice picture of us—that is, we, the Editor. We think the artist has rather flattered Aunt Polly, as she is not quite so handsome as the picture makes her, but as she is a little proud, it's all right, any way. Now as we have to be gone into the country for a few days, we will get our printer to attend to putting in our picture, which, by the way, is not finished as we leave; but as our artist is first class, we have no doubt he will flatter us, as well as Aunt Polly. So now, hoping you will be pleased with our picture, and wishing you A HAPPY NEW YEAR, too, good bye all.

The Editor.

THE PRINTER'S GREETING.

Dear Children:—The Printer now has a word to offer. The Editor is away and his artist took a good picture of him as he was going out of the office, with his umbrella under his arm, wondering what in the world would become of us all "if it doesn't rain!" Of course the picture flatters the Editor, who, by the way, is extremely handsome (?) He scolded Aunt Polly awfully for calling him "old fogy," and we expect fits for daring to put this in about him. If we only dared we would say more. But here is the Editor's picture, true to nature.

"If it doesn't rain!"

One Help for Hard Times.—To increase the product of one's labor, and make the best use of what is obtained, will be helpful these hard times. The hints and suggestions of intelligent, practical men and women, who devote themselves to study and observation, must be of utility. We do our readers a favor by directing their attention to the *American Agriculturist*, which is now entering upon its 36th year. It is full of information, that cannot fail to be helpful to every family, and to every man, whatever his calling. Each volume gives from 600 to 700 fine original engravings, pleasing and instructive to all classes. Its house plans and improvements, with full particulars of cost, etc., its fearless exposure of humbugs and quackery, indeed its whole make up and reliable character, render it worthy of a place in every household. The publishers supply it at the low cost of $1.60 a year, post-paid, or four copies for $5.40. Orange Judd Company, publishers, 245 Broadway, New York City.

The Annual Register.—We are in receipt of a copy of the *Annual Register of Rural Affairs* for 1877, published at Albany, N. Y., by Luther Tucker & Son, and mailed to any address for 30 cents. It is the oldest (and only) publication of the kind, and contains 150 pages of practical matter, interesting to every resident in the country, illustrated with no less than 140 beautiful engravings, almost all original. We notice particularly a capital article on "Practical Ventilation," which discusses this all important topic in a clear and at the same time scientific manner giving fully illustrated descriptions of all the improved systems.

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Stockton, Dec. 9th, 1876.

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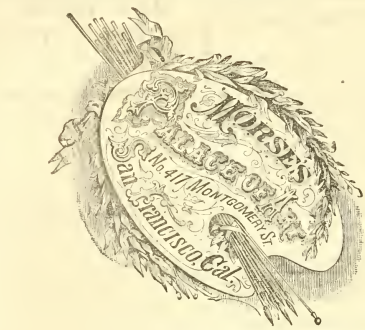

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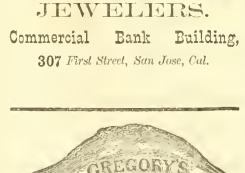

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City Gardening.

GARDENING FOR FEBRUARY.

VEGETABLE GARDEN.

If not already done, prepare the soil at once for the garden. Stiff soil should be covered with sand, where obtainable, and at any rate should be very completely pulverized several inches in depth, and well manured. Plant peas, onions, beets, carrots, parsnips, lettuce, cress, radish, turnips, etc., where they are to grow, also potatoes, and set out cabbage and cauliflower plants if you have or can get them. If not, start some in beds at once. Also, start tomatoes, egg plants, sweet potatoes and peppers, in beds or boxes, where they be well sheltered from frosts. Delay planting corn till the middle of March, and squashes, beans and cucumbers and melons until near the first of May, when there is little danger of frost. Then tomatoes, etc., can be transplanted with safety.

FLOWER GARDEN.

If not already attended to, plant out your flowering bulbs, such as lilies, gladiolus, amaryllis, tuberoses, dahlias, peonies, agapanthus, etc. Trim back your geraniums for a new start, also petunias, and other half-hardy perennials. Cut back rose bushes at once. Divide up the sweet-williams, pinks, chrysanthemums, violets, etc., and give enough room to spread in rich soil. This is an excellent season for dividing most plants at the roots, and to start cuttings in sand in a moist sheltered place, in garden beds or in boxes. Plant hardy and half-hardy annuals of all kinds. We refer you to catalogues, which can be had for the asking, for the varieties you want. But don't forget that a few showy varieties are better than too many kinds. The alyssums, asters, balsam, cockscombs, daturas, amaranths, nasturtiums, phlox, portulacas, salvias, zinnias, etc., etc., are especially fine in variety. If you did not plant biennials and perennials last fall, plant at once, and they will give you some flowers this season; if a little late they will make a fine show when many others are out of bloom, if they get plenty of water and care.

Make war against weeds of all kinds; hoe or pull them out. Also, look out for slugs and cut-worms, and other insects. Don't crowd too many plants together. Where too thick, thin out. Group together for color and effect, but do not plant tall growing plants so as to hide the short ones. Do not give very much water until hot, dry weather, but let the plants grow in a light, dry, warm soil, during spring weather. This is important.

THE FRUIT GARDEN.

Trim your blackberry, raspberry, currant and gooseberry bushes, if not already attended to. Delay pruning grape vines until danger of frost is past. Thin out and hoe your strawberries. Grape and other cuttings may be planted this and next month, and all small fruits be divided at the roots and transplanted, when desirable to increase their number. Cut scions now for grafting, pack in sand in boxes, keep under shelter, and use in March or April. Nurserymen rootgraft young trees and small plants this month, and until May. Scions saved now in sand will keep till June, as will cuttings of most kinds.

This should be a busy month in the garden. Overhaul your house plants, re-pot all that do not look thrifty, replacing the soil with fresh, rich loam. Start hanging baskets. Chinese primroses and French violets, with wild strawberries, lobelias, sedums, madeira vines, smilax, ivys, wanderering Jew, stone crock, and many other creeping plants of fine foliage, in fact almost any good plants look fine in hanging baskets. Moss and ferns should be used also when obtainable.

ANGORAS vs. SHEEP DURING A DROUTH.

While the sheep suffered and much loss was sustained during the late short season of drought, the Angoras got along as well as ever, and were fat, with plenty to eat upon their natural ranges. The reason for this is plain. The sheep is a grass eating animal, and the grass being annual, gave out. The Angora is a brousing animal, subsisting largely on herbaceous shrubs. It can live independently of grass, while a sheep would perish upon the same range.

In this respect it is more nearly related to the deer and giraffe. Its flesh also resembles the deer's, and is more like venison than mutton. There is a similar difference in its habits from the sheep, as the camel is different from the horse. The camel is a shrub cater, the horse a grass eater.

There is an immense deal of feed on this coast suitable for the Angora. The many uses to which the beautiful fleece, the pelts and skins can be put, are constantly increasing, and the price of the skins and pelts are advancing. Lately the Angora Robe and Glove Company, of San Jose, have added whiplash braiding to their industries, and they are now tanning the real pebble kid for gloves, etc. The fleece of pelts make the best dusters in the world—superior to feathers for all nice furniture, etc.

The Company is selling all the gloves, robes, etc., as fast as they can make them.

Another industry is now inaugurated, and will in future be pushed right along. This is the canning of Angora venison. Heretofore there has been some difficulty experienced in disposing of the meat to butchers at paying rates. Now Mr. C. P. Bailey has demonstrated that the meat can be put up in cans and sold at good prices. This will give an increased value to these animals. When once popular, the Angora venison will be in great demand. We have eaten of the meat at many a meal, and must say that we prefer fresh Angora meat to mutton. There is no healthier meat, or sweeter, cooked in any way.

SHEEP—STRAW—STOCK FARMING.

During the late winter drought many thousands of sheep perished from hunger. The grass upon the ranges gave out, and no provision had been made to feed them with either hay or straw. There is annually enough straw burned by farmers, to get rid of it, to winter all the sheep in the State were it properly stacked and saved for that purpose. A little co-operative understanding and arrangement between stock men and grain farmers would benefit both parties. Every good grain farmer should save his straw. Well stacked it will last good a dozen years, and feed his own or somebody's stock in time of need. Every owner of live stock upon large ranges should make arrangements with some convenient grain producer to have the straw saved for the use of his stock. Of course a still better way is for every farmer to diversify his farming with grain, hay, stock, etc., and thus economically manage his affairs. Only the best stock pays much anyway, and where each farmer keeps a few head he can have the best, and also best conduct his farming to his own advantage.

CHIPS FROM CORRESPONDENTS

Mr. Woodward, of the Mountain House, Contra Costa county, has perfected a model of a machine for loading and unloading vessels with sacks of grain or other material, coal, lumber or heavy timbers. The work is accomplished by means of a geared belt moving upon rollers. The power may be applied at either end of the belt, or at any convenient point, and the machine can be readily adjusted to convey cargo to or from the deck or hold of a ship or barge at almost any angles less than perpendicular. Your correspondent was favored with a private exhibition of its capacity and adaptability, whereat minture sacks of wheat, liliputian sticks of timber, were rapidly conveyed from imaginary barges to the holds of imaginary ships on docks, and vice versa. The inventor, who was formerly captain of a bay and river steamer here, claims for his method, economy of time, labor and power, over any others now employed for taking or discharging cargo of the kind above mentioned, or for storing the same in elevated places, or removing therefrom. It is understood that certain parties have become interested in Mr. Woodward's plan, and will test it.

C.

"If some ingenious misanthrope should set about devising a place of torture far a fellow being, a place forlorn, where not a blade of grass nor living, shrub nor green thing should be, where neglect, decay and dry-rot should reign, and solitude and desolation combine to crush the spirits, strangle hope and induce the keenest pangs of remorse, a place where every object and prospect would call to mind and fearfully magnify some misdeed or folly of the victim's past life, and preclude the faintest hope for repentance or forgiveness, a place where his meat should be Pharoah's lean kine, his Mocha bilge water, and his consolation the weed of bitterness, so that he might hate all human kind—himself most of all, in short, a place of mental anguish and soul's torment; still, in the writer's opinion the misanthrope's ingenuity and malignity could not contrive anything comparable to a California second-rate rural hotel in a droughthy season. MARTYR."

"Martyr" might have added: Where charges are exorbitant in proportion to poorness of accommodations, and unless the visitor will treat all hands to vile whisky, he is counted no gentleman, and is open to insult and abuse.—[ED.

From Bishop's Creek, Inyo Co., a subscriber writes: "We have a fine little valley here in this remote corner of the country, where farming is principally conducted by main strength and awkwardness, and we have the best market for everything we raise that I know of on this coast."

The Alden fruit drying establishment at San Lorenzo, owned by a company composed of Messrs. Meek, Crane, Lewelen, and others of that vicinity, was not in operation last season. The establishment is located in the heart of a famous fruit region. The expense of the Alden process of curing fruit, together with the low price for the product, coupled with the fact that green fruit so near the market brings ready sale, is the reason why.

C.

J. W. Dougherty reports that S. B. Martin, John Jonston and himself, of Murray township, Amador Valley, have imported nineteen studs from clydesdale, Scotland, and that they have upwards of three hundred half-breeds, three-fourths, and a few full bloods each, also four or five young studs, for sale. They ought to advertise.

C.

Stop!

Stop depreciating property and labor, and appreciating debts. Do justice to the debtor, and no injustice to the creditor. Stop the piracy of making the commodity a debt is to be paid in, impossible of being obtained. Stop the conspiracy that has been going on for the last few years, of turning this great land and its noble men and women over into the hands of a few bankers who control the gold of the world. The scheme is too murderous of the rights of men to be tolerated any longer. Stop passing laws by Congress that only a few desperate rascals know anything about, the others sitting like basswood men, while the crime against the country is being perpetrated. Thus it was with the demonetizing of silver. Stop all this —stop this villainous law-making!"

☞ See the notice of arrival of a carload of King's Boilers and Engines. Prepare for irrigation, by getting one.

California AGRICULTURIST AND Live Stock Journal.

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☞ We are determined to adhere to our resolution to admit none but worthy business advertising in our columns, and to keep clear of patent medicine, liquor, and other advertisements of doubtful influence.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this Journal a choice medium for reaching the attention of the masses.

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Notice to Eastern Advertisers and Advertising Agencies.

☞ Hereafter no proposition for advertising in this journal will be entertained without pay in advance. Our published rates are the standard for all.

EDITORIAL NOTES.

An Interest in the CALIFORNIA AGRICULTURIST for sale. Apply to or address JOSEPH PERKINS, 406 Market Street, San Francisco.

See our December and January numbers for instruction in tree planting, etc.

Beatrice Cenci.—To accommodate many new subscribers we have made arrangements with the Cal. Art Pub. Co. to continue the premium certificate No. 3 to April 1st, 1877.

Selfish Interests control the wisdom and reason of most persons—else smart men are generally fools. The San Francisco Chamber of Commerce claims to represent the intelligence of the business men of the Pacific Coast. At a single meeting they passed the two following resolutions. The first we think a sensible one, but the last in the interest of Shylocks, is totally at variance with it, and both together mean just nothing at all:

Resolved, That the introduction of legal tender notes as a uniform currency is especially recommended for consideration.

Resolved, That in the opinion of this Chamber the interests of commerce and the prosperity of the country will be subserved by maintaining gold coin as the sole standard of values in all transactions above the sum of $5.

First blowing hot and then blowing cold,
They pray for legal tenders, but hug the God of Gold!

While there has been less than four inches of rain, up to February 1st, for the season, in San Jose, there has been ten inches in the hills ten miles distant. The same rule will apply to other districts. But the rain-fall in San Jose is above the average in the grain growing districts of the State. Fine, warm weather, heavy dews at night, and no drying, cold winds, are all favorable to rapid growth of grain and hay crops. These conditions may continue, and occasional rains insure fair hay and light grain crops. But the chances are, that there will be but little grain and light hay crops. It is always wise to hope and work for the best but be prepared for the worst in doubtful seasons like the present.

Hops.—A correspondent in Elhi, Washington Territory, informs us that section is a large farming district, and that two-thirds of the farmers are raising hops. The great hop growing districts East are in Western New York and Wisconsin. The prices for the last year have averaged 27 cts per lb. In 1875, 60,000 bales of 200 lbs. each were exported. The crop of 1876 will exceed that crop, and pay growers $250 to $300 per acre. Owing to the prevalence of disease in Europe and the Eastern States, hop growing is a precarious business, one year with another. But on this coast, and especially in Washington Territory, the yield is very large, the vines healthy, and hops very superior.

As there is more speculation and fluctuation in hops than in any other product, there is more need of producers to form associations, and to use every means to keep posted, so as to control prices, instead of being controlled as heretofore. The importance of this matter is very apparent, and should be strongly urged upon producers. The production of hops in the United States, according to the census reports of 1870, was nearly twenty-five million pounds, the State of New York producing about seventy per cent. of the whole, Wisconsin nineteen per cent., Michigan three per cent., California two and one-half per cent., Vermont two per cent., Minnesota and Maine one per cent each, all other States about one and one-half per cent.

With a batch of new subscribers from Petaluma comes a cheering letter, which reads thus:

"We have had a fine rain; a few more like it will give us good crops this season. Our Grange is making some good moves on the currency question,—it ought to have been discussed by all the Granges years ago.

FREEMAN PARKER.

That's just what we think.—ED. AGR. CULTURIST.

ANSWERS TO QUERIES.

ASPARAGUS ROOTS.

ED. AGRICULTURIST: Our Redwood friend, M. E. O. W., can get all the Asparagus roots, 7 years old, desired, by conferring with the writer. It is indeed a luxury on the table, and I discover she knows how it should be prepared, a secret I have taught many, and one that is still unknown in restaurants. It would surely become more extensively cultivated in farm gardens, if all the farmers with their wives and grown up sons and daughters were to happen around and dine with our friend some day when she had asparagus for dinner served up in the way she knows so well.

POLAND CHINA SWINE.

Mr. J. Rathgeb can learn all he desires, and I think, procure the desired stock of hogs by conferring with Messrs. Culver & Merrill, San Gregories, San Mateo county, as they imported what was reputed thoroughbreds, direct from Ohio. Am sure they are as good as any, though I don't believe that a thoroughbred exists in any kind of stock.

WM. S. DOWLING,
Half Moon Bay, San Mateo county.

The Pacific Specimen, by Marder, Luse & Co., type founders, San Francisco, is a beautiful sheet, and ably edited by an enterprising firm.

Some People seem to think that it costs nothing to run a paper—and they pay up accordingly. We have paid out for the one item of postage alone over $60.00 since January 1st, all within one month.

Rainfall.

Following is the rainfall for this section to the end of January for the present season, as kept by Mr. Ethell, of San Jose Bank Building:

Sept.	16	.01 inches
"	29	.09 "
Oct.	16	.50 "
"	17	.06 "
"	18	.14 "
"	27	.14 "
"	28	.28 "
"	29	.05 "
Nov.	16	.08 "
"	27	.01 "
Jan.	16	.20 "
"	17	.76 "
"	18	.48 "
"	19	.17 "
"	21	.07 "
"	28	.25 "
"	29	.21 "
"	30	.26 "
	Total	3.77 "

Table for Orchard Planters and Gardeners.

43,560 square feet make an acre.
280 feet by about 208 feet make one acre.
27 trees to the acre, 40 feet apart.

48	"	"	"	30	"
108	"	"	"	20	"
135	"	"	"	18	"
300	"	"	"	15	"
358	"	"	"	11	"
432	"	"	"	10	"
534	"	"	"	9	"
676	"	"	"	8	"
882	"	"	"	7	"
1,220	"	"	"	6	"
1,764	"	"	"	5	"
4,808	"	"	"	3	"
10,890	"	"	"	2	"
43,560	"	"	"	1	"

To find the number of plants for an acre at a given distance, divide the number of square feet in an acre by the number of square feet given to each plant.

To find the circumference, multiply the diameter by 3.1416.

To find the diameter, multiply the circumference by .3183.

4 inches is a hand for measuring horses.
6 feet is a fathom.
3 geographical miles is a league.

Scientific.—Herbert Spencer sends the following conundrum to the readers of the CALIFORNIA AGRICULTURIST:

Can the oscillations of a molecule be presented in consciousness side by side with a nervous shock, and the two be recognized as one?

The only clue the author gives is, that feeling and nervous action are two faces of the same ontological something.

A prizie will be given for the correct answer.

☞ Please notice the advertisement of the sale of the entire Avenue herd of Short-horns. This is the most valuable herd in California, or on the Pacific Coast. They were brought here by experienced breeders, not as a speculation, but as a permanent enterprise. Two of the partners have since died, and Mr. Jones and administrators, have to sell to close up affairs. No such opportunity has ever before offered to secure the finest pure bred stock in America.

NEW PUBLICATIONS.

"Ishmael, or In the Depths," is the name of Mrs. Emma D. E. N. Southworth's best work, just published in book form, for the first time, by T. B. Peterson & Brothers, Phil delphia, Pa. It is having an immense sale. It is one of the most fascinating stories. The life of "Ishmael Worth" as here portrayed, is a guiding star to the youth of every land, to show them that there is no depth of human misery from which they may not, by virtue, energy and perseverance, rise to earthly honors, as well as to eternal glory. The story is founded on the life and career of one of the noblest of our countrymen, who really lived, toiled, and triumphed in this land and by his own energy arose from the deepest obscurity to the highest fame. "Ishmael" is published in a large duodecimo volume, of over 700 pages, bound in morocco cloth, gilt back, price $1.75, and is for sale by all booksellers, or copies of it will be sent to any one to any place, at once, on their remitting the price of it in a letter to the publishers, T. B. Peterson & Brothers, Philadelphia, Pa.

"Harper's New Monthly," and "Scribner's Monthly," are upon our table; both first class and all the better for the rivalry for superior excellence.

"The Phrenological Journal and Science of Health," combined, is a most excellent magazine; only $3.00 a year. Who can afford to be without it? S. R. Wells & Co., New York.

"Ropp's Commercial Calculator," is a work that should be in the hands of every business man and farmer. The art of reckoning is simplified, and a new system of tables shows at a glance the value of all products, wages for any time, measurements of everything, etc. Price 60 cents to $2, according to binding. For copy, address, C. Ropp, Jr., Bloomington, Ill.

"United States Newspaper Directory," containing names of all newspapers and other periodicals published in America,—a valuable hand-book for business men everywhere. The most compact, concise and best arranged work of the kind ever gotten up. For a copy send $1 with this notice to C. A. Cook & Co., Chicago, Ill.

"Vick's Floral Guide," quarterly 25 cents a year, is the best and cheapest thing of the kind in the world. The first number of the current year is a splendid number. Everybody should have it.

"Mr. Gregory, the Marblehead, Mass., seedsman, sends out a fine free Catalogue of his choice vegetable seeds and other valuable matter. See his advertisement, and send for one.

"Elocutionist's Journal," published quarterly by Jesse Haney & Co., 119 Nassau St., New York, contains late and excellent extracts from popular writers, dialogues, humorous declamations, anecdotes, etc., suitable for elocutionary exercise. Just the thing for teacher's public entertainments. Only 40 cts. per annum.

"Fragaculture."—Felix Gillett, of Nevada, Cal., has written a very good work on the cultivation of the strawberry. From what little we have examined the work we feel able to recommend it as a practical guide for all who would cultivate this delicious fruit for the table.

"The Pioneer," is a new weekly publication, the organ of the Santa Clara County Pioneers, filled with interesting reminiscences, a cheap and popular journal, ably conducted, by Alex. P. Murgotten, San Jose. Terms, $2.50 per annum.

Poetry.

To My Wife,

On the Anniversary of Our Boy's Death.

BY SETH HOLMES.

THE following lines were written from the depths of woe by a gentleman seventy years of age, who has laid his boy, the hope of his life, in a drunkard's grave, "murdered," as he expressed it, in a private note to us, "murdered by the rumsellers."

Come sit thee down to-night, wife,
And draw thy chair to mine;
My soul so sad to-night, wife,
Needs now that love of thine;
For thou in all life's troubles, wife,
To me hath been a guide,
To cheer me when great sorrow came,
My own sweet, darling wife.

Then sit thee close beside me, wife,
And tell of years gone by—
How in the rosy morn of life,
Our hearts with hope beat high,
And children to our cottage came,
Rich blessings to bestow;
But, darling wife, those happy days
Were in the long ago.

Since then we've seen, my dear wife,
Hope's brightest visions fade,
And one we loved so well, wife,
In manhood's prime was laid
Where the weary rest in quiet, wife,
Free from the tempter's snare;
But God will judge the wrong, wife,
Let whisky men beware!

Our staff and stay has gone, wife,
But still we'll hope and try
Our duties to perform, wife,
And in the by and by
We may together go, wife,
And meet our darling boy,
Where heart will throb to heart, wife,
Where nothing can annoy.

I see your tears are falling, wife,
Your mother-heart has bled—
'Tis better as it is, wife,
That our dear boy is dead.
They can no longer harm him, wife,
His spirit now is free—
And in a few more years, wife,
He'll welcome you and me.

LOWER LAKE, January, '77.

Plow, Hammer and Pen.

From the West leaps out a thunder shout
That thrills the nation's heart—
The plodding chief and the legal thief
Grow white in the rabbit mart;
And shameless fraud that walks abroad,
And rules with an iron hand,
Whose ne'e are thrown from zone to zone
Over all the tortured land;—
All the legionry of Monopoly
That grapples the people's life,
Things foul that feed, with insatiate greed,
And fatten on peace or strife,
Now blanch and cower at this mighty power
Which come to judge and smite—
Hurrah for men of Plow, Hammer and Pen,
Who lead in the battle for Right!

When war's fierce fray had swept away
Our sons at the cannon's mouth,
And their countless graves, like Red Sea waves,
Had billowed the fields of the South,
We fondly thought they had fallen and fought,
That traffic in men should cease,
But we are sold and bartered for gold
In the devil's marts of peace;
The slaves of slaves, of huckstering knaves,
Whose cunning devours our toil!
By Heaven at length they shall feel the strength
Of the tillers of the soil.
Hurrah for the Men of Plow, Hammer and Pen
Whose limbs no gyves can bind—
That, was a fight of thew and might,
But this, is the fight of the mind.

We've headed the wood's grim solitudes,
We've buried the waste in flowers,
Woo'd the wild earth into fruitful birth,
And 'couched her in fairy bowers,
Till the young wind rolled over seas of gold
And died in the fragrant hay,
Till the wanton rills, by clatt'ring mills,
Ran musical through the day.
The songs of the birds, the rattle of words
From our children romping about,
The women within, with their household din,
God's beauty and bounty without!
Till the very air seemed pulpable prayer,
And our spirits refreshed;
Till, when the day had died away
To a gleam in the mellow west,
We said, "No lord, nor other horde,
Can desecrate our toil,"
And we blessed the land where the toiling hand
Was master of the soil.

But all our dreams were mirage gleams,
Bright phantoms of the sun!
We plowed and sowed, we reaped and mowed,
But when our worn was done,
The spoiler came, in freedom's name,
And swept us of all but land.
Came like a thief, with high belief
And law in his dainty hand;
And he, whose breed never filled a reed,
Robs by his polychoric side:
While we and ours, who've woven the hours
Into labor, and love and care,
Can only mope while our crops of hope
Are setting in black despair.
Plow and sow! harrow and mow!
And gather ye clods of the soil,
That cunning and fraud, may revel abroad
And fatten upon your toil.

What avails that he who assails
Is democrat, not lord?
Is't sweeter to live in slavery
To cunning than the sword?
When every right is crushed by might,
All manhood beaten down,
What victim cared if the despot wears
A bonnet or a crown?
Not all the speech the masters teach
Can save the slave from shame.
Away with cant! we freedom want
The substance, not the name.
Oh, liberty, thou soon shall be
Redeemed from city marts,
And proudly crowned, when girded round
With loyal granger hearts!

And now, at length, our giant strength
Shall smite the plotting knaves,
Our deep Reform, lashed by the storm,
Shall 'gulf them in its waves.
Can cent per cent brave our discontent,
Or range his puny crew
To meet the shock, the wild Sirroc,
Of our men of mind and thew?
Hu rah for men of the Plow, Hammer and Pen,
Strong hearts and brain combined;
What foe can stay the headlong sway
Of our mighty march of mind?
Hand clasped in hand we firmly stand,
Secure in our myriad might,
Our battle cry is "Victory,
And God defend the right!"

—[Scanlan.

A Song for the Greenback.

BY MRS S. M. SMITH.

When the soldier starved in the trenches,
And knew, while he waiting lay,
That his children plead, in vain for bread
In his country far away;
While up in the halls of Congress
Stood men who day by day,
Turn back Liberty from blood that plead,
Turned back the soldier's pay;
For the usurers' specious logic
And sophistries false and old,
The army did wait, while the long debate
Went on for the rights of gold,
Till the very gain seemed colored
The roar of the Southern gun,
And the stern command, came up thro' the land,
"Let the greenback's will be done."
Then, the go-enback sped on its mission,
Hurrah! for the Greenback true,
It saved the day, when hope gave way,
It won the victory,
But, sh! when the war is over,
And homeward the soldiers throng,
When at peace we live once, and the land is alive,
With the sound of the workman's song,
Once more in the halls of Congress,
The usurer's voice is bold,
The strife returns, and the greenback burns
At the shrine of the god of Gold.
The hope of the poor may perish,
The workman's song be stilled,
And ruin wide, the land betide,
Till the shylocks vaults are filled,
The busy places of labor
Deserted and silent grow,
And up and down, through country and town,
The tramp and the beggar go,
And the soldier, living, envies
The fate of his comrade, dead,
As weary he waits, at the rich man's gates,
To beg for work or bread.
How long, ye toiling nasty,
Will you bow to the cunning few?
Up! now, and strike, for a freeman's right,
With a freeman's weapon, too.

The ballot, not the bullet!
'Tis the only power to save
From bloody strife, or the slavish life
That ends in the pauper's grave.
Then a cheer for the people's money!
And its foes shall now give way,
It gave us power, in our darkest hour,
It gives us power, to-day.

Men of America.

Men of America, look where you stand:
The curse of monopoly covers your land!
In the north, in the south, the east and the west,
Behold the dread march of this terrible pest!
From the great vital centers of commerce and trade
Monopolies swarm of every grade;
With their network of iron and gold at command
They are crushing the life from your beautiful land:
They are fast gaining power ne'er dream't of before,
Transcending the proud feudel barons of yore.
And all their great wealth—deny it who can!
Is wrung from the toil of the poor workingman.
Men of America, look where you stand!
A darkness of Egypt now covers your land;
A cormorant swarm, from all points they fly,
Like carrion crows they darken the sky.
Soon the soul of your freedom and laws will be fled
And your children be crying and dying for bread.
Men of America, rise in your might,
Cry out for justice, and strike for the right,
By ballot—not bullet—the work may be done,
And shame on the slave who his duty would shun.
Let us all be our cause be honest and true,
And fling to the breeze our Red, White and Blue:
Red for the vultures that feed on the poor,
Blue for our faith in the fathers of yore,
And white for the pure, the honest and good,
Emblem most fit for our great Brotherhood.

"Business" in Mississippi.

Why, howd'y, Mass'r Johnny! Is you gone to keepin' store?
Well, sah, I is surprised! I neber heard ob dat afore.
Say, ain't you gwine to gib me piece o' good tobacco, please?
I's long wid you in Georgia, time we all was refugees.

I know'd you would; I allus tells de people while an' black,
That you's a real gen'l'man, an dat's de libin fac,—
Yes, sah, dat's what I tells 'em, an' its nuffin' else but true.
An' all de cullud people t'inks a mighty heap ob you.

Look heah, sah: don't you want to buy some cotton? Yes, you do;
Dere's oder parties wants it, but I'd rather sell to you.
How much? Oh, jes' a bale—dat on de wagon in de street—
Dis here's de sample—dis is cotton mighty hard to beat!

You'll find it on de paper what de offers is dat's made;
They'll all de same seditions; half in cash an' half in trade—
Dey's mighty low, sah—Come, now, can't you' pe've upon de rates
Dat Barrot Brudders offers; only twelbe an' seben eights?

Lord; Mass'r Johnny, raise it! Don't you knows dat I'se a frien'
An' when I has de money I is willin' for to spen'?
My custom's wuf a heap, sah; jes; you buy de bale an' see—
Dere didn't nebber nobody lose nuffin' off o'me.

Now, what's de good ob gwine dare an' scramblin' de bale?
When people trades wid me day allus gits a bones' sale;
I ain't no hand for cheatin,' I believes in actin' fa's
An' everybody'll tell you dat dey allus foun' me squar'.

I isn't like some niggers; I declar' it is a shame
De way some ob' em swin'les—what, de cotton ain't de same
As dis one in de sample! Well I'm blest sir if it is!
Dis heah must be my brudder's sample—yes sah dis is his.

If dat don't beat creation! Here I've done been totin' your
A sample different from de cotton! I—will—be—consound!
Mass'r Johnny, you mus' scuse me. Take de cotton as it stan's,
An' tell me if your willin' for to take it off my han's.

Shol nebber mind de auger! 'taint a bit o' use to bore,
De bale is all de same as dis heah piece de bagain's tore;
You oughtn't to go pullin' out de cotton dat a way.
It spiles de beauty ob de—what, sah! rocks in dar you say?

Rocks in dat 'ar cotton? How de debble *kin* that be?
I packed dat bale myself'—hol' on a minnit, le' me see—
My stars! I mus' be crazy! Mass'r Johnny, dis is fine—
I'se gone an' hauled my brudder's cotton instead of mine!

The Canesteo Wagoner.

BY JEFFREY GIFFORD.

I.

The forest paths were decked with flowers,
And during the long summer hours
The wagoner drove on;
His docile team, heavy of limb,
Were stout and true, and 'twas his whim
Their backs to ride upon.

II.

The wagon, very large and strong,
Was built great loads to move along;
And, 'mid the green-wood glades,
Slowly and carefully, their way
They threaded each eventful day,
With goods of various grades.

III.

Long ribbons, with their varied hue,
Of crimson, scarlet, brown, or blue,
Swept from the horses' heads;
And happily they trudged away,
Servant and master, both felt gay;
Pleasure unconscious spreads.

IV.

Small tinkling bells, with music sweet,
Kept measure with the horses' feet,
And sounded low, but clear;
While all along the devious way
A wreath of sunbeams fell in spray,
Charms for both eye and ear.

V.

Bright plumaged birds among the trees,
The murmur of the balmy breeze,
And echoing waterfalls,
All lent a passionate delight
To these companions, morn or night,
While on their varied calls.

VI.

On each lapel, upon his breast,
And button-hole of coat or vest,
The wagoner wore flowers.
Aye! blythe as any lark was he,
A life of toil and jollity
Enlisted all his powers.

VII.

The welcome inn was gained at last,
All thoughts of trials in the past
Fled from the wagoner's mind;
He seemed the happiest of all
Who gathered in the tavern hall
To hear how fared mankind.

VIII.

For, with his India silks, as well,
He brought the news, and loved to tell
Of things both strange and true;
Marvels of flood, and field, and skies,
The rustics heard with keen surprise:
Meanwhile amazement grew.

IX.

And, interspersed with drink and song,
These tales were bound the whole night long,
And wonderful they were.
The oftener told—for such is fame—
They grew unlike in form and name;
Such tidings gossips bear.

X.

Along the road were shori relays,
And thus, throughout the long, long days,
The wagoner found rest;
Fresh teams, refreshment and repose,
A place to drink, or smoke, or doze,
And all the while feel blest.

XI.

Along the roads, too, rosy maids,
Buxom with health, won from the glades,
Did shyly look their love.
Handsome was he, erect and trim,
And vigorous in every limb,
Hero beside the dove.

XII.

But times have greatly changed since then,
When, slowly through the woodland glen,
The wagoner drove past.
Steam hurries by with lightning speed,
The telegraph proclaims each need;
Those old days are the last.

PUBLIC LAND MATTERS.

Mr. Lane of Oregon has introduced a bill for the sale of desert lands in certain States and Territories. The bill is so framed as to allow any citizen, or person who has filed a declaration to become a citizen, to take up and hold a mile square of land by conducting water upon the same within three years thereafter, and the privilege of purchasing the same at $1.25 per acre.

"All lands, exclusive of timber lands and mineral lands, which will not, without irrigation, produce some agricultural crop, shall be deemed desert lands within the meaning of this act.

To take effect in the States of California, Oregon and Nevada, and the Territories of Washington, Idaho, Montana, Utah, Wyoming, Arizona, New Mexico and Dakota."

It is wonderful how anxious some of our dear law-makers are to have all the Government lands gobbled up, in large quantities, We can see no good to come from such a law; but discover that there is a great opportunity for land grabbers to get hold of the best remaining portions of our lands which require irrigation, under the pretense of settling and reclaiming the same. There is no honest call for such an act by the people, and they do not need it; but they do need and ask for a law, or amendment to the Constitution of the United States, that will forever prevent the acquisition of Government lands in large bodies by any one person or association.

Mr. Lane has also introduced another bill providing that any settlement made by a person entitled to the benefits of the Homestead and Pre-emption laws shall give him a vested right, forfeitable only by his failure to comply with the law under which he claims; and in case such settlement is on surveyed land, his right to enter a quarter of a section shall date from the actual settlement, but without requiring the papers to be filed until the survey is made.

This seems to be made in order to clinch the nail. Of course it is right only itself, and only wrong in connection with the power to control large tracts of lands.

And now comes

BILL TO GOBBLE UP THE TIMBER ON GOVERNMENT LANDS,

introduced by Mr. Chafee, providing that all citizens of the United States, and other persons bona fide residents of the State of Colorado or Nevada, or the Territories of New Mexico, Arizona, Utah, Wyoming, Dakota, Idaho, Washington and Montana, shall be, and are authorized and permitted to fell and remove, for building, agricultural, mining, or domestic purposes, any timber or other trees growing or being on the public lands of the United States in either of said States or Territories of which such citizens or persons may be at the time bona fide residents. As it now is, many poor men can have homes and business by taking up and purchasing these lands for his own use. Open them up to the despoilers, and a few rich men would control the whole thing. We saw enough of this business in Nevada the three years we were there, to have an idea of the matter.

But the most open-faced and outrageous monopoly of all, on its face, is the bill offered by Mr. Piper of California, "granting to the Alaska Ship-building and Lumber Company the right to occupy and purchase certain lands in the Territory of Alaska upon paying the Government price therefor. For the purpose of encouraging shipbuilding and developing the territory of Alaska, the Alaska Ship-building and Lumber Company, a corporation formed and existing under the laws of the State of California, and its successors and assigns, are hereby granted the right to enter upon and take possession of the island of Kou, situated in the waters of the Territory of Alaska. * * * * And the said Alaska Ship-building and Lumber Company, its successors and assigns, may purchase timber lands upon the shores and inlets of the adjacent waters of Christian and Prince Frederick sounds and Chatham, Duke of Clarence and Kekon Straits, upon giving notice of its intention so to do, describing therein generally the lands and giving security for the payment of the expense of making the necessary surveys, and upon the completion and return of such surveys, paying for such land one dollar and twenty-five cents per acre; such purchase to be made from time to time and in such quantities as may be required."

Here is a grand attempt to monopolize a whole section of valuable country under a most shallow pretense, which would virtually exclude any other person or company from "ship-building" in that Territory. The introduction of this bill by Mr. Piper should consign him to a political grave. What right-thinking man can ever vote for him again? It is time that the people watch the acts of Representatives and Senators, and stamp each with a seal of merit or demerit as each deserves, irrespective of party affinities. Not another acre of Government lands should ever be voted away from the people under any pretense whatever. Leave it open to honest pre-emption, and throw every guard around it to secure its bona fide settlement by actual settlers. Then leave the matter to the good sense and to the necessities of the people, and let them settle it as fast or as slow as they choose, in a legitimate way. There is no necessity for the Government to sell the lands any faster than they are pre-empted. To do so, is wrong in principle, and worse in practice.

DECISIONS BY SECRETARY OF INTERIOR—CASE OF FRANCOIS LACOMBE.

January 13- —Certificates of location issued by Surveyor-General in confirmed private land claims under act of Congress of June 2, 1858, *are assignable.*

FROM REPORT OF LAND OFFICE, 1876, p. 50.

"Another very important question has been for some years before the courts and the Department, respecting lands within fraudulent and rejected exterior limits of Mexican and other private grants in California. This question relates to the condition of the lands thus embraced during the period of alleged reservation and prior to the date of determination of the Department or courts of the true limits and area of the private grants. It was finally settled by the Supreme Court in Newhall vs. Sanger, (October term, 1875,) wherein it was declared that these lands were '*reserved*' and not '*public lands*,' and that in consequence thereof did not pass to the railroad companies under their grants made during such reservation, reversing the decree of the circuit court of the United States for the district of California, and *decisively avoiding the Departmental decision of Mr. Secretary Delano in the case of the Western Pacific Railroad Company vs. H. E. Dillingham, et al.*" Applications for patents for homesteads and pre-emptions within exterior limits of invalid Mexican grants are therefore *cut loose,* and the applicants should have their patents.

SUPREME COURT OF THE UNITED STATES,

October term, 1876; Antonia Beryessa, administrator of Nicholas Berryessa, deceased, appellant, vs. the United States; appeal from District Court of the United States for the district of Cal.; Waite, C. J.: The Supreme Court has decided adversely upon claims under Mexican grants where a grant from the Mexican government has not been "deposited and recorded in the proper public office among the public archives of the Republic." Cites: U. S. vs. Camburton, 20 How., 64; U. S. vs. Castro, 24 How., 349; U. S. vs. Knight, 1 Black, 25; Peralta vs. U. S., 3 Wall., 440. Decree of district court affirmed.

The farmers have lately gained the suit against the miners for overrunning their land with debris, and ruining them for agricultural purposes. Probably the matter will be taken before a higher court, but the agriculturists must eventually be protected.

AN EPISTLE BY OUR DREAMY CANVASSER.

In answer to my timid request to subscribe, a California granger as tall as the encalyptus, and with a beard like a redwood top, advanced a stride in my direction, rested one toot on the summit of his gatepost, placed the palm of his hand carelessly on the top of a telegraph pole, took a bird's-eye view of your correspondent's outfit, ejected a narcotic flood from his mouth, submerging some colonies of ants and a beetle ranch, and exclaimed, with a startling abruptness, "What's that, young man?" I dare say I felt like Gulliver at Brobdignag, and for purposes of easy conversation I would fain have sat upon the giant's hat brim. However, I managed to titilate his tympanum at a safe distance.

"Your agricultural papers be blanked!" said he, alarmingly emphatic in word and gesture; "It makes me mad to see what blamed fools them fellers be who write agricultural papers and books, anyhow. Now," said he, twanging the telegraph wire with his little finger, "what d'ye they know 'bout time for plowin', or puttin' in crops, or prunin' vines, out here." I interrupted him with a feeble remark, and intimated that very likely he had been reading an arctic rural, adapted to a soil and climate, remote from the land of the perennial strawberry and pea vine, and that suggestions for cultivating and transplanting the lichen, subsoiling on ice floes, and improving the breed of polar bears and walruses, cannot be safely followed by the California farmer, the conditions in the two sections not being exactly identical. He gave me a contemptuous look and continued volubly, citing numerous instances going to show the worse than Egyptian darkness pervading the minds of agricultural writers and editors in general, and Mr. Greeley in particular. Again I remonstrated, arguing that "What I Know About Farming," though an invaluable agricultural treatise, doubtless, yet is not universally regarded by our farmers as the most reliable authority on California husbandry; that husbandmen who experiment by eastern and foreign journals and have an abiding Mr. Billings almanac as a weather guide for our coast, will occasionally miscalculate; that California publications, especially the California Agriculturist, are more reliable and much safer guides for our farmers in agriculture and horticulture than the aforesaid authorities; that some chaff is invariably mixed with the wheat in spite of the most careful winnowing by the editor; that even editors have been sometimes deemed fallible by rash and irreverent readers; that no person should imagine his little acre and affairs the object of our special and exclusive solicitude, and that whoever deems knowledge useless which does not refer directly to the crops and flocks within his own gates, is no wiser than an oyster in his unopened shell; that I should advise him to take the——. Here the telegraph wire snapped with a vicious twang, the ponderous foot of Brobdignag came down with a dreadful thud, another narcotic rolled from his mouth and roared past me. At this crisis, fortunately, I awoke in the comfortable bed of a hospitable farmer, to realize that my frequent wrestle with the cynical and skeptical granger had been renewed in my dreams. C.

STOCKTON LETTER.

IRRIGATION—GRAPE CUTTINGS.

Ed. Agriculturist: Many farmers living on the Calaveras and Mormon Channels, which are the two principal outlets of the Calaveras river, are engaged in *damming,* in anticipation that Spring rains will come; in which case four to five thousand acres of land will be flooded by means of these dams. At present water enough to irrigate twenty acres a day is utilized. The flow is decreasing because there is no snow to feed the stream. I have 6000 Muscat of Alexandria vines. I grafted in 500 of that variety last year by the underground process, using two cuttings; nine-tenths of them lived. In case both grafts grow I dig down and saw off one of them.

I propose now to graft 1,500 with Muscats and White Corinth. The latter variety are seedless and very difficult to procure here. Of the Mucat of Alexandria I could sell twice as many as I did last year, which was 13,000. Orders received before March, with cash, will be filled at the rate of $5.00 per M., and shipped in order. I want to buy some Gordo Blanco and Sultana for trial. I believe at Stockton we have one of the best places in the world for grape culture and raisin making.

D. A. Learned.

Jan. 15, '77.

Estimate of Seeds for an Acre.

	POUNDS.
Beets and Mangold Wurtzel	4 to 6
Cabbage	1 to 1½
Carrot	2 to 3
Cucumber, in hills	1 to 2
Clover, red, broadcast alone	15 to 20
Clover, mixed with ½ bushel Timothy and 1 bushel Red Top	10
Clover, white, broadcast alone	10 to 15
Alfalfa	16
Lucerne	15
Onion, in drills	4 to 5
Parsnip, in drills	4 to 6
Radish, in drill	5 to 8
Radish, broadcast	12 to 16
Salsify, in drills	6 to 8
Spinach	8 to 10
Turnip and Ruta Baga, broadcast	½ to 1½
Turnip and Ruta Baga, in drills	1
	QUARTS.
Beans, pole, in hills 3x4	8 to 12
Corn, in hills	8 to 12
Broom Corn, in hills	10 to 12
Mustard, broadcast	12
Sorghum, or Chinese Sugar Cane	2 to 3
	BUSHELS.
Beans, bush., in drills 2½ feet apart	1½
Corn for fodder	3 to 4
Barley, broadcast	2 to 3
Barley, in drills	1½ to 2
Buckwheat	1 to 1½
Hungarian Grass	½
Kentucky Blue Grass	2 to 3
Lawn Grass	2 to 3
Millet, broadcast	½ to ¾
Oats	2 to 3
Orchard Grass	2 to 3
Peas, in drills	2 to 3
Potatoes, in drills or hills, cut tubers	10
Potatoes, cut to single eyes	6
Rye, broadcast	1 to 2
Red Top	2 to 3
Rye Grass	2
Salsfoin	2 to 3
Timothy	½
Vetches	2 to 3
Wheat, broadcast	1 to 2
Wheat, in drills	½ to 1

The Poultry Yard.

PRACTICAL POULTRY KEEPING

We find the following very practical article in the *Russian River Flag*. It is just such information as our readers will appreciate.

Ed. Flag:—At your request I give some of my experience with poultry, together with hints and items which may be of interest and possible benefit to a portion of your readers, as now-a-days nearly every family that has the room keeps more or less fowls, if only to supply their table with undoubtedly fresh eggs and occasionally a broiled or a roast chicken.

LEGHORN FOWLS.

It is now well established that pure Leghorn fowls far exceed any other variety in laying qualities. They are hardy, easy to raise, mature early, and when well cared for will lay at six months of age. I have frequently had March-hatched Leghorn pullets commence laying in August, and continue more or less regularly all through the following Winter. I have, first and last, bred twenty different varieties of fowls, and my experience proves the White Leghorn, in comparison to others, to mature earlier, lay earlier, produce more eggs, consume less food, and are the most beautiful and profitable of all fowls. They lay a large white egg, and are docile and easily restrained—seldom or never want to set.

TO INCREASE EGG PRODUCTION,

And keep hens of any breed in good laying condition, they require careful and constant attention. My manner of feeding to ensure the greatest amount of eggs is about as follows: At daybreak in winter, and five o'clock in summer, I give warm scalded ground food, either bran, shorts, cracked corn, ground wheat, or barley, and grain at night, a change occasionally being necessary. In this food once in ten days I mix a teaspoonful of sulphur to a dozen fowls—and two or three times a week the same proportion of cayenne pepper. Meat is supplied twice a week, and if there is no grass that the fowls can get I feed turnip tops, cabbage, or onions, cut up, every day; give them pounded oyster shells, and ground bone or bone meal, which is prepared especially for poultry. I experienced some trouble at first in getting the latter article on this coast, but now receive it from the mills in large quantities. It costs five or six cents a pound, and is not only the most convenient to use, but is the best article known to stimulate hens to lay and encourage growth in chicks. One spoonful a day to a dozen or fifteen hens, mixed in their morning feed, or one-third the amount to the same number of growing chicks. I consider this the most profitable feed I give.

Hens will lay and lay well at certain seasons of the year without the above extra care. But with it good laying breeds will lay the year around with the exception of a few days' rest, say five to nine, at the end of each litter of 20 to 30 eggs. I have had Leghorn hens produce 250 eggs in a year, with extra care, while common stock with common care will not lay more than 75 to 100. I never keep hens for laying to more than 18 or 20 months of age, or to their second moult, but good stock birds three to five years; these, however, I never feed pepper or other stimulating food.

TO PREVENT VERMIN

If sulpher is fed as before directed and coal oil occasionally applied to the perches, houses kept white washed outside and in, vermin will not trouble the fowls. When a hen is placed to set, sprinkle a spoonful of sulphur or carbolic powder in the nest, and again at the end of ten days, and also dust some under the wings and feathers. With this treatment my hens never suffer from insects.

SEASON TO RAISE CHICKS.

Young chicks cannot be raised to any advantage in the dryer parts of California, from June to October, but at all other seasons they do well if properly cared for. My mode of caring for them is as follows, and I lose very few: My breeding fowls, to commence with, are healthy and vigorous from having fresh blood introduced as often as necessary.

THE CHICKS WHEN HATCHED

Are left undisturbed for twenty-four hours, then removed to a comfortable coop with the hen mother, and fed a hard-boiled egg, chopped fine, with about the same weight of white bread; after the second day, white bread and baked corn-cake crumbled fine. After the first week corn-cake alone, and after the second week, scalded meal and bran or shorts, and the last thing at night, cracked corn with the fine part sifted out, or a few grains of wheat. Pure fresh water is kept before them all the time.

With this manner of feeding my young chicks never have the diarrhea (*i. e.*, excrement adhering to the fluff), but when fed at first with wet or soft food, this is apt to be the case; they get dumpy, wings droop and finally die. Milk, either sour or sweet, is most excellent for chicks, as well as grown fowls. When insects are scarce I give them meat two or three times a week; this is not a necessity, but it makes them grow faster and larger.

GREEN FOOD

Must be had in order to have them do well, so I endeavor to raise them during the grass season, which supplies all they need. There are other items in regard to the setting of hens; diseases peculiar to this coast, and their treatment, etc., which I would be glad to give if a sufficient desire is indicated by your many readers, but as this article is already too long, I must omit further reference to them here.

POULTRY PAYS.

There is no question in my mind but poultry can be made to pay better than any other live stock on the Pacific coast, in proportion to the capital invested. Prices of eggs and poultry are always high compared with the Eastern market; the demand is unlimited and will always exceed the supply, as may be seen by the European markets, where prices are constantly increasing. Eggs in London and Paris are at least fifty per cent higher than twenty years ago. In order to pay, fowls must have constant attention, and can never be allowed to suffer from a day's neglect, which may take several days' close care to recover; new blood should be mingled yearly, to ensure health, size and stamina; if kept for eggs the progeny of common hens crossed with Leghorn cocks, will increase the quality of eggs at least fifty per cent; and this without any extra expense of keeping. Common fowls crossed with light Brahmas make a splendid market or table bird, the size being increased nearly one-half; of course they consume more than a smaller breed, but they always bring the largest price.

C. P. Stone.

Healdsburg, Dec. 19, 1876.

The editor of the *Flag* adds the following:

Mr. Stone's hen-houses are located in different parts of a 7-acre lot, 50 fowls being the maximum allowed to each house. The setting houses are furnished with portable boxes containing two nests each; this arrangement prevents the hens from quarreling over their nests, and at the same time enables each one to find her own without difficulty. These setting boxes are thoroughly ventilated, but protected from the weather. After hatching, the hens and chickens are removed to roomy coops with wooden floors, covered with several inches of dry earth. These are located and conveniently arranged in a one-acre lot, where they are free from any annoyance from other fowls, until they are able to take care of themselves, when they are removed to the larger lot. Near the time for hatching the Brahma eggs are moistened daily in warm water for the purpose of softening the shell and membrane inside, so that the chicks can easily force their way through. The feed used is ground barley, wheat, cracked corn and chopped vegetables. Crackings as a substitute for meat are procured from the lard factories in San Francisco.

Mr. Stone has had fifteen years' experience in the business in different localities, both in the Atlantic States and on this coast. He considers the White Leghorn the most profitable variety for producing eggs, while the Brahma is preferred for the table, being of much quicker growth, and attaining a much larger size; he finds no difficulty in disposing of all the eggs at $2 per dozen, and the fowls at $2 each. Mr. Stone paid for Brahmas at the rate of $17 per trio, and for Leghorns at the rate of $15 per trio.

Raising Fowls.

The following article, which we clip from the Tenn. *Rural Sun*, is exactly suited to California, and is just as good as though we wrote it. Now is the time to begin to think about some business that will pay, when crops—not the chickens', but the grain crops—may be short:

"It may be safely asserted that the people of America, with all their advantages of climate and variety of soil, have never learned to raise one fowl where France produces one hundred. There are more fowls consumed in that country than any other in the world according to population. There, raising poultry is a regular business, and they make it pay. The two great staples in that country may be said to be *fowl* and *grape*, and that they live by and upon these two. We possess facilities for the production of both of these in richest abundance, and the inquiry is simply our people are not willing to raise fowls, because two many of them feel and think it too small a business to be engaged in. Each family raises some; very few families raise enough for their own family use; and it is a very rare thing to find one where enough is raised to make it profitable as a business. In order to conduct poultry raising profitably it is important to have the best varieties for this section, with arrangements for keeping in separate yards, scattered about the farm, so as not to engender disease by too many in a flock, and all their quarters kept in order, and plenty of good, pure water, with choice suitable food. In raising fowls very great care must be had not to crowd too many together, cleansing and fumigating the establishment.

The whole economy of this industry has to be studied and practiced to be made profitable, and it will then be found to be one of the best for the amount of investment and labor. The profit is first in having the very best food in eggs and meat that can be for the family use; and next in raising what is always ready sale at good prices the year round, bringing in a continuous stream of money. The little boys and girls can be well and profitably employed in this work, and it all tells in summing up the family work and earnings. Let our people have more fowls and fewer foul chicken houses.

It is a well known fact that a hawk will always light on some conspicuous place close to the poultry yard, from which to swoop down on his victims. Taking advantage of this, erect a pole with a flat surface at the top just large enough to hold a strong steel trap. Fasten the trap with a chain to a staple in the pole and await results. No bait will be needed, for the hawk will be quite certain to light on the trap and be caught. A gentleman who has tried this method has succeeded in killing all the hawks in his neighborhood, and now can raise poultry without loss, except by accident.

Eggs for Hatching.—An English agricultural paper says that eggs intended for setting should be stored with the large end down, because the air bubble does not spread so much as when the small end is down—this spreading of the air bubble being known to affect the freshness and vitality of the egg.

A comparison of the weight and cost of a passenger train on the eastern, standard gauge, and on the Boston, Revere Beach, and Lynn Railroad, narrow gauge respectively, has been made. These two roads run nearly side by side and the carrying capacity of the two trains is practically the same. The heavy Pullman car is a disadvantage to the Eastern Road, gives capacity for 230 passengers, weigh 138 tons, and cost $63,000; one locomotive and six passenger cars on the Revere Beach and Lynn Road give capacity for 272 passengers, weigh 53 tons, and cost $18,000.

Grapes for Hogs.—It will take more pounds of grapes to make a pound of pork than it will of corn, but grapes will fatten hogs faster than corn, and they are much better than barley or corn to feed young pigs when weaning them from the milk of their mothers. Indeed, they are the best substitute for milk to feed young pigs on we have ever found. Those who have grapes and pigs will sell their grapes much better by turning their pigs into the vineyard than by picking and freighting the grapes to market at the present price.—*Record-Union.*

California is the Spain and Portugal and France of America, and may one day rival those countries in the production of raisins and wine. The samples sent East last year, to Chicago, New York, etc., exceeded expectation, and were viewed very favorably by connoisseurs. In New York a box was placed side by side with a box of imported fruit, and lost nothing by the comparison—was even pronounced fresher, of better flavor and finer bloom, and Shylock himself could not have found fault with the weight.—*Am. Grocer.*

Salaries must be made large enough to support th dignity (?) of our government officials in the style of European princes and nobles, though the people starve.

Agricult'l Progress.

Is Production Declining.

AGRICULTURAL speakers and writers often give the impression, without positive assertion, that we produce less in proportion to population than formerly. If this is so we eat less than formerly, for we export more. But no intelligent person, after due deliberation, will assert that we feed less to farm animals or live less generously ourselves than our fathers fed and fared. A statistical answer in the negative has been made by the Statistician of the Department of Agriculture, in an address delivered before the Agricultural Congress at its last session in Philadelphia, as follows:

There are problems presented daily which only agricultural statistics can solve, and upon which largely depends the future prosperity of the farming interest. We cannot here enumerate them but a reference to one or two may suffice. The inquiry has been often made of late, Is production declining? It has been assumed that we produce in proportion to population less of the great staples of production than formerly. It is the province of agricultural statistics to decide the question. The census alone cannot determine it. Such is the fluctuation in rate of yield, that the supply of a given staple may be actually increasing, while the product of the census-year may be less than its predecessor ten years before. For instance, corn for 1869 was returned 760,944,549 bushels, and in 1859 the figures were 838,792,742. It has often been asserted on the strength of these returns, that corn production was declining, not only per capita, but in absolute comparison of quantity. Is it so? The year 1869 witnessed what in country parlance is called "a failure" of the corn crop. It is plainly folly to take such a crop for comparison. And this fact illustrates the absolute necessity of annual estimates to supplement decennial returns. Since 1869 there have been six harvests exclusive of the present one. Of these six, the largest and smallest stand in juxtaposition: the one in 1875, the largest ever made, is 1,331,000,000 bushels; and the other, another failure, in 1874, 850,000,000 bushels. The increase in a single year is 56 per cent. In 1870 and 1872 the product was nearly 1,100,000,000; the average of annual estimates, for the six years since the census, 1,047,000,000 bushels; and this confirms the opinion, founded on careful study of the history of cropping in 1869, that it was scarcely more than three-fourths of a full crop. Now, let us examine a period of twenty-six years. We find that the yield per capita in 1849 was 25.5 bushels; in 1859, 26.6 bushels; and in 1869, the year of a three-fourths crop, 19.7 bushels—the same result as that deduced from the period since that census. If we take the year 1875, the result is excessive, 30 bushels per capita, but include it in the period of six years past, and we have 25.5—precisely the supply of 1849.

As to wheat, a general deduction from comparison of census exhibits is less erroneous. The increase in round numbers was from 100,000,000 to 173,000,000, and again in 1869 to 287,000,000. Now, the latter was a large crop, yet the average for the six subsequent crops is 266,000,000, while the estimate for the last year of the six was 292,000,000. Distributed according to population, there were 4.3 bushels per head in 1849, 5.5 in 1859, 7.46 in 1869, and for the period since 6.6 bushels. This shows an increase of more than 50 per cent. in the proportion of supply in twenty-six years, and is exactly in accordance with the history of the several crop years, and is a proof of the substantial correctness of these estimates.

The export figures illustrate further the fact of the large increase of wheat-production. The total export of wheat and flour in fifty years is equivalent to 1,062,000,000 bushels of wheat, while 91,000,000 were shipped during a single year, 1874. The exports of one-half of this period up to 1850 were only 178,000,000—less than twice those of 1874. The heavy increase during recent years is especially noteworthy, nearly half of this semi-centennial aggregate having been shipped in ten years. While our population has nearly doubled since 1849, the quantity of all cereals taken together has more than doubled. The census reported 867,000,000 bushels. Allowing something for incompleteness of that enumeration, 2,000,000,000 bushels produced in 1875 allow a distribution of 46 bushels to each inhabitant, in place of 37.4 census-bushels, or possibly 40, with a complete enumeration. Our average supply since the last census exceeds 40 bushels; and thus is demonstrated the remarkable fact that, with our rapid increase in numbers, perhaps without a parallel, we not only keep up our high standard of cereal production, but actually advance it. This is owing to our vast areas in instant readiness for the plow, to our advance in variety and perfection of agricultural machinery, and to the stimulus of a foreign demand, which has never been so pressing as during the last ten years. It is possible to double our present population without diminishing this high rate of supply. There is more danger at present of overproduction and unremunerative prices than of scarcity. The proportion engaged in agriculture in the West is still too large, and far too large in the South; and the withdrawal of workers from rural to other industrial arts would not only greatly facilitate the creation of wealth, but would stimulate invention, labor-saving skill, and industry in agriculture.

Having reached the conclusion that corn-production is not declining, and that the supply of wheat has increased 50 per cent, what can we say as to the meat-supply and the number of horses? As to the latter, it is not found, according to the fears of too conservative farmers a former generation, that multiplying railroads tends to diminish the use of horses. More horses are now used in taking people to the train than were formerly required to perform the whole journey. The census reports only the horses of the farm, without reference to those of the town or city; but, for comparison, taking the numbers in proportion to population, there were nearly 20 to each one hundred people in 1850, quite twenty in 1860, and, notwithstanding the waste of the war, eighteen in 1870. The increase since has at least equaled the advance in population. Coming to cattle, while we know that the numbers in the census are too low, especially for Texas, California, and the Territories, we may use them for comparative purposes. From 1850 to 1860 we find the number of all kinds of cattle slightly increasing, from 77 to 81 to each hundred of the population, and then witness a decline to 62 in 1870. Since that date the numbers have increased, but not materially faster than the population. The consumption in the war was a prominent cause of the decline, and a growing preference to horses as a substitute for working oxen tended to further reduction. The supply of sheep per capita was somewhat greater in 1870 than in 1860, the ratio rising from 70 to to 73, but less than in 1850, when there were 93 per hundred of population. But the most marked decline in supply has been in swine; the figures in these decennial periods being respectively 129, 105, and 65. The tendency is to still further decline in some of the principal swine districts.

There is another statistical point of especial interest in this connection. While numbers have declined in proportion to population, the value of all farm animals divided among the population would give about $24 per head in 1850, $34 in 1860, and $44 in 1870. Not only has scarcity increased the value, but improvement in breeds has added size and weight, so that with smaller relative numbers we are able to feed our people and ship more beef and pork and lard than over. Here is food for reflection. Here is the cause of advancing prices of beef and pork. And it is fortunate that increase in meat production is consonant with a higher and more intensive agriculture; that it is, in fact, one of the essential conditions of such improvement. If we act upon the suggestion of Mr. Harris, and perfect breeds of meat producers that shall be able to assimilate a larger proportion of the fat and meat producing elements contained in the food supplied, we shall hasten the adoption of a system of agriculture that shall be restorative and not exhaustive.

We thus learn from statistics that grain-growing exclusively, though remunerative as a temporary expedient, is a speculation and not true farming. Land in the prairies worth $50 per acre is bought for $5, and its true value is discounted in installments; i. e., the soil is plundered piecemeal, and converted into wheat and cash to furnish means for fencing and house-building, and to supply capital to the pioneer farmer. In this point of view, it has been remunerative as a pioneer expedient; but with a farm equipped for the work of a long future, the superior profit of a restorative system, in which domestic animals fill an important part, cannot be questioned.

Investigations in Seeds---The Seed-Control System in Germany.

Of the many new ways in which science has, during the past few years, been applied to agriculture, one of the most interesting and useful is in the examination of seeds. In 1869, Dr. Nobbe, director at the station at Tharand, in Saxony, commenced the study of the seeds in common use in German agriculture, and founded the first "seed-control station." How much good has come from this may be inferred from the fact that during the seven years that have since intervened, over 4,000 samples of seeds have been examined at Tharand; that an astonishing amount of adulteration has been discovered, so much so as to exert a by no means inconsiderable effect upon the agriculture of the country; and that the importance of the work has come to be recognized so fully as to induce the establishment of a number of seed-control stations in Germany and other European countries. Various kinds of adulterations have been discovered. Sometimes these consist merely in seeds of weeds and other extraneous plants, either of inferior value or positively harmful, which have been gathered with the genuine seeds; sometimes they consist of inferior seeds purposely added to increase the bulk and weight of the wares sold. In some cases the seeds used for adulteration are deprived of vitality by previous steaming, roasting or boiling; in others, so base are the practices to which the love of unlawful gain will stoop, not even this means is used to prevent the injury which must be brought upon the consumer by raising useless or noxious plants, instead of the useful ones he seeks. Genuine seeds which have lost their vitality by age are often mixed with fresh seeds. The most barefaced, though not the most harmful seed-swindling discovered by Professor Nobbe, consists in grinding quartz rock, sifting out particles of the proper size, dyeing them in proper colors, and mixing them with clover seeds. Samples of clover seed containing 25 per cent by weight of this admixture of colored grains of quartz can be distinguished only by very close and careful examination from the unadulterated seed.

So patient, ingenious, and successful have been Dr. Nobbe's investigations, that he is able to distinguish with accuracy the seeds of the common cultivated plants and weeds, and to determine as well the percentages of pure seeds and adultenations, as what proportion of the genuine seeds are capable of germinating and thus producing vigorous plants.

One outgrowth of Dr. Nobbe's work at Tharand, is his lately completed *Handbuch der Samenkunde*, volume of 642 pages, of which 366 pages are devoted to the physiology of seeds, 138 to the means of determining their agricultural value, and the rest to the means of preventing frauds, and other topics.

Dr. Nobbe points with pride to the fact that at the time of the completion of this work there were already established in Germany some twenty seed-control stations, whose directors had almost without exception spent more or less time at the station at Tharand in preparing for their work, that still more stations were to be established in Germany, and that similar institutions were founded or proposed in Denmark, Austria, Hungary, Holland, Belgium, and Italy. A similar arrangement should be established in the United States.

Words of Praise.—The New York *Evening Mail* has an article on raisin curing in California, endorsing the general belief that it is destined to become a great industry, which it concludes with the annexed paragraph:

With her mines of precious metals still adding their stores to the wealth of the world; with her wheat successfully rivalling that of any other clime; with her cigars and tobacco equal to the best that Havana sends us; with her magnificent fruits, extorting the admiration of all who see them or taste them; and now, with her new raisin-producing industry, surely our sister of the Pacific slope has almost an embarrassment of riches, and, perhaps, more than her fair share.

Grapes at ten dollars a ton pay big in old, established vineyards. Mr. I. De Turk, of Sonoma county, has thirty acres of vines, young and old, which averaged six and one-half tons to the acre, or two hundred tons to the whole vineyard, this year, making about 60,000 gallons of wine, equal, if not superior, to the vintage of any previous year since he has been in the business. Even at the extreme low price of grapes—$10 per ton—it will be readily seen that a well cultivated vineyard is profitable—more so than staple crops. Sixty-five dollars an acre leaves a net profit of $55 per acre. At any figure above $10 a ton, grape culture is enormously profitable.—*Foot-Hill Tidings.*

The Kitchen.

Work, Work, Work.

Work, work, work,
Is ever the farmer's song,
There's never a time to stop and think,
Be the evenings ever so long.

Yes, work, work, work,
Till your hands are hard and rough;
Work, and wring, and scrape,
Till your finger nails wear off.

And then sit down and write
Of the joys of a farmer's life;
'Tis Oh, to be a slave,
Or a modern farmer's wife.

Oh no, the men are not to blame,
For they do all they can;
But then there are a hundred things
That are beyond a man.

They do their work, then go to sleep,
No "yeast" in on their minds;
If all the babies wake and weep,
It ne'er disturbs a man.

It's work, work, work,
Yes, cook, and weed, and hoe,
Till our lady-like and dimpled hands
Are NOT "as white as snow."

I would that I were dead,
And buried in a "row;"
Under a fragrant cabbage head,
And at my feet a "hoe."

A "mushroom" planted at my head,
So that its VERDANT shade
Might woo the birds to come and sing
About my lonely grave.

But I can't die, I have no time,
I would take a day or two,
And stop the plow, so I must wait
'Till the busy time is through.

—[Prairie Farmer.

Bread--Stale and Fresh.

I DON'T like stale bread—do you? My reason for disliking it is very much the reason why I don't like Dr. Pell; your reason is really the same, but you probably cheat yourself into the belief that it is something else—namely: because the bread is "so dry." Allow me to undeceive you. *No* bread is dry; bread just baked is nearly *half water;* and the stalest of stale loaves has not more than a hundredth part of this water.

The fact that bread contains nearly half its weight of water, is surprising, but not so surprising as that your own body contains a considerably larger proportion—nearly three-fourths. The flour from which bread is made is dry enough, containing not more than sixteen per cent of water; but it has a great tendency to absorb water, and in the process of baking it absorbs it rapidly. The gum which is produced from the starch of the flour in baking, holds this water firmly, and the gluten which forms a coating round every little hollow in the bread, resists evaporation, and thus bread becomes moist, and keeps moist, let it be ever so stale.

But if stale bread be not dry bread, what is it? What makes that familiar difference between the soft, spongy crumb of yesterday's baking, and the harsh, crumbling morsel of six days old? There is no difference of moisture; every cook or baker will tell us there is no use of placing bread in a moist cellar to keep it fresh or prevent evaporation of its water, since it will assuredly become stale as the hours roll on.

On the other hand, every baker and every cook will also tell us, that if a stale loaf be placed in the oven again for a few minutes, it will come out having, for a time at least, all the characters of fresh bread.

Who does not know the effect of toasting a slice of stale bread? The fire scorches the outside layers and renders them completely dry; but, if the slice be not too thin, we find the interior layers deliciously soft and palatable. It is the water in the bread which prevents the loaf becoming all crust. In an oven with a temperature of 500 degrees, the loaf gets baked or browned outside, and the crust is formed; but the inside never has a temperature above one hundred degrees.

If the inside is thus slow to heat, it is also slow to cool. Every one knows how long the crumb of a roll continues warm, and the loaf taken from the oven at one, even on a cold winter morning, comes warm to the breakfast table at seven.

Does it not seem that the difference between fresh bread and stale bread is only the difference between *hot* bread and *cold* bread; especially when we reflect that we have only to warm the stale bread to make it fresh again. But there is this fact that stands in the way of such an explanation; the bread which has been rebaked, although hardly distinguishable from bread which has been recently baked, is only so for a very short time—it rapidly becomes stale again. Were this not the case we need never have to complain of stale bread.

The conclusion drawn from experiments is, that staleness depends on a peculiar condition of the bread, and this condition is itself dependent on a fall of temperature. —*Dr. Lockridge.*

Usefuyl Hints.

In copper utensils, if the tin has worn off, have it immediately replaced.

Be clean in your person, paying particular attention to the hands, which should always be clean.

Empty soups or gravies into a basin as they are done; never allow them to remain all night in the stock pot.

Cleanliness is the most essential ingredient in the art of cooking; a dirty kitchen being a disgrace to both mistress and maid.

Be very particular in cleaning all vegetables free from grit. Nothing is so unpleasant, and nothing so easily avoided, if but common care be exercised.

Do not go about slipshod. Provide yourself with good, well-fitting boots. You will find them less fatiguing in a warm kitchen, than loose, untidy slippers.

If you have a spare kitchen cupboard, keep your baked pastry in it; it preserves it crisp, and prevents it from getting wet and heavy, which it is liable to do in the larker.

If you have a large dinner to prepare, much may be got ready the day before, and many dishes are a great deal better for being thus made early. To soups and gravies this remark is particularly applicable.

Provide yourself with a dozen good-sized serviceable cooking aprons, made with bibs. These will save your gowns, and keep you neat and clean. Have them made large enough around so as to nearly meet behind.

Clean your tins with soap and whitening rubbed on with a flannel; wipe them with a clean, dry, soft cloth, and polish with a dry leather and powder whitening. Mind that neither the cloth nor the leather is greasy.

Never let your stock of spices, salt, seasonings, etc., dwindle down so low that some day, in the midst of preparing a large dinner, you will find yourself minus a very important ingredient, thereby causing much confusion and annoyance.

Do not scrub the inside of your frying pan, as after this operation any preparation fried is liable to catch or burn in the pan. If the pan has become black inside, rub it with a hard crust of bread, and wash in hot water mixed with a little soda.

Pudding cloths and jelly bags should have your immediate attention after being used; the former should be well washed, scalded, and hung up to dry. Let them be perfectly aired before folded up and put in the drawer, or they will have a disagreeable smell when next wanted.

Do not be afraid of hot water in washing up dishes or dirty cooking utensils. As they are essentially greasy, lukewarm water cannot possibly have the effect of cleaning them effectually. Do not be chary also of changing and renewing the water occasionally. You will thus save yourself much time and labor in the long run.

When you have done peeling onions, wash the knife at once, and put it away to be cleaned, and do not use it for anything else until it has been cleaned. Nothing is nastier or more indicative of a slovenly or untidy cook than to use an oniony knife in the preparation of any dish where the flavor of the onion is a disagreeable surprise.

After you have washed your saucepans, fish kettles, etc., stand them before the fire for a few minutes, to get thoroughly dry inside, before putting them away. They should then be kept in a dry place, in order that they may escape the deteriorating influence of rust, and thereby be quickly destroyed.

"Domestic Economy."—Miss Sedgwick has asserted that "the more intelligent a woman becomes, other things being equal, the more judiciously she will manage her domestic concerns." And we add that the more knowledge a woman possesses of the great principles of morals, philosophy, and human happiness, the more importance she will attach to her station and to the name of a good housekeeper. It is only those who have been superficially educated, or instructed only in showy accomplishments, who despise the ordinary duties of life as beneath their notice. Such persons have not sufficient clearness of reason to see that "Domestic Economy" includes everything which is calculated to make people love home and be happy there.

ORIGINAL RECIPES BY COELIA.

Apple Blancmange.—Pare and core enough sour and juicy apples to fill an ordinary pudding dish three-quarters full; sugar and cinnamon to suit the taste; add one pinch of salt; take four heaping spoonfuls of corn starch, wet it with cold water, and then mix it rapidly with one quart of boiling water; add three quarters of a cup of sugar, and boil five minutes. Pour this over the apples, beating the mixture well, then bake in a slow oven six hours. It is best eaten cold.

Excellent Veal Loaf.—Three pounds veal cutlets and a small piece of salt pork (uncooked) chopped together very fine; one teacup of cracker crumbs moistened with a little water; one egg; season with salt and pepper; add sage or savory if you like. Bake one and a half hours and slice when cold.

Household Advice.

The Use and Care of Lamps.

ALL explosions of petroleum lamps are caused by the vapor or gas that collects in the space above the oil. When full of oil, of course the lamp contains no gas, but immediately on lighting the lamp consumption of the oil begins, soon leaving a space for gas, which commences to form as the lamp warms up, and after burning a short time, sufficient gas will accumulate to form an explosion. The gas in a lamp will explode only when ignited. In this respect it is like gunpowder. Cheap or inferior oil is always most dangerous.

The flame is communicated to the gas in the following manner: The wick tube in all lamp burners is made larger than the wick which is to pass through it. It would not do to have the wick work tightly in the burner; on the contrary, it is essential that it move up and down with perfect ease. In this way it is unavoidable that space in the tube is left along the sides of the wick sufficient for the flame from the burner to pass down into the lamp and explode the gas.

Many things occur to cause the flame to go down the wick and explode the lamp: First, a lamp may be standing on a table or mantel, and a slight puff of air from an open window or door may cause an explosion; second, a lamp may be taken up quickly from a table or mantel and instantly exploded; third, a lamp is taken into an entry where there is a drught, or out of doors and an explosion ensues; fourth, a lighted lamp is taken up a flight of stairs, or is raised quickly to place it on the mantel, resulting in an explosion. In these cases the mischief is done by the air movement—either by suddenly checking the draught, or forcing air down the chimney against the flame; fifth, blowing down the chimney to extinguish the light is a frequent cause of explosion; sixth, lamp explosions have been caused by using a chimney broken off at the top, or one that has a piece broken out, whereby the draught is variable and the flame unsteady; seventh, sometimes a thoughtless person puts a small size wick in a large burner, thus leaving considerable space along the edges of the wick. An old burner, with its air draughts clogged up, which rightfully should be thrown away, is sometimes continued in use, and the final result is an explosion.

The following directions for using kerosene lamps are issued by a famous lamp manufacturer, and seem worth publishing for general information:

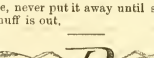
1. Dry the wick before the fire.
2. Use none but the best oil.
3. Fill the container with oil each time before lighting. Cut the wick the same curve as top of cone.
4. When the wick is well saturated with oil, light with wax taper, turn it below the cone until the flame appears only about half an inch above the cone, put on the chimney, and then turn the pinion slowly until the flame is the required height.
5. The wick must be always below the cone when burning.
6. The flame must never be allowed to remain less than three-quarters of an inch above the cone, or the lamp will smell.
7. Cleanliness is imperative to the well burning of the lamp. Keep all perforations perfectly free from wick cuttings, paper ash, etc.; all burners take to pieces to gain access to interior.
8. To extinguish the light turn it down

until a small blue flame appears; it will then begin to flicker, and eventually go out.

Sometimes the wick becomes too short to carry up the kerosene, and the lamp goes out. If you have not time to put in new wick, a piece of cotton rag pinned on below will answer every purpose, and become a good feeder. If a hole should become broken in the glass chimney, paste on a piece of paper, which may often be done in a moment, and it will answer its purpose well for a long time, or until you get a new chimney. Sometimes the burners of lamps become gummy, and prevent the wicks moving freely. Boil them up in suds over the fire a short time, and they will become entirely clean and work well.

To Extinguish Kerosene Flames.—One of the most ready means is to throw a cloth of some kind over the flames, and thus stifle them; but as the cloth is not always convenient to the kitchen, where such accidents are most likely to occur, some one recommends flour as a substitute, which, it is said, promptly extinguishes the flames. It rapidly absorbs the fluid, deadens the flame, and can be readily gathered up and thrown out of doors when the fire is out.

Prevention of Fire.—Keep matches in metal boxes, and out of the reach of children; wax matches are particularly dangerous, and should be kept out of the way of rats and mice. Be careful in making fires with shavings and other light kindlings. Do not deposit ashes in a wooden vessel, and be sure that burning cinders are extinguished before they are deposited. Never put firewood upon the stove to dry, and never put ashes or a light under a staircase. Fill fluid or spirit (or kerosene) lamps only by daylight, and never near a fire or light. Do not leave a candle burning on a bureau or a chest. Always be cautious about extinguishing matches or other lighters before throwing them away. Never throw a cigar stump upon the floor, or into a spit-box containing sawdust or trash, without being certain that it contains no fire. After blowing out a candle, never put it away until sure that the snuff is out.



Farmers' Shoe Grease.

Put into some fire-proof vessel one-fourth pound of lard or soft grease, like lard, one-fourth pound of tallow—beef or mutton tallow—one-fourth pound of bees-wax, half a pound of neat's-foot oil, three or four tablespoonfuls of lampblack and a piece of gum camphor as large as a hen's egg. Melt the ingredients over a slow fire, and stir them thoroughly after they are melted. Never heat it so hot as to make it boil. Soft grease which has salt in it will not injure the leather. Now have the leather warm, and warm the grease, not so it will flow, but have it so soft that it may be put on with a brush. Should the leather seem to need it, give the shoes or boots an oiling occasionally. It is not best to dry this grease all in before the fire, but allow it to remain on the surface of the leather. A light coat of this kind will exclude the water even if the boots are exposed to the wet all day. This shoe-grease will not injure leather by making it hard and inelastic. When a man's boots are exposed to the wet he should hang them up in the kitchen where the leather will gradually dry, and put on a little grease every morning. It is far better to grease a little often, than to grease bontifully every ten or twelve days. Leather should not be allowed to become very dry before greasing. Always apply the grease as soon as the leather is almost dry, then the leather will be mellow and never become hard. Nothing injures shoes or boots more than to set them aside to dry when covered with dirt. Keep boots and shoes away from the fire when they are liable to become heated. Heating injures the leather.

Another: Take one part (by weight) rosin, one part beeswax, and four parts good, fresh lard. Mix and melt together over the fire, so as to be sure not to burn the mixture. It makes an ointment that is superior to anything I have ever seen tried, for the flesh of either horses or cattle, for either fresh or old sores, and is especially good to remove old, dry scabs.

The mixture is the best thing I ever used for boots or shoes for out-door wear, as it makes the spongy leather waterproof, and the hard leather soft.

Cement for Mending India Rubber.—Cut virgin or native India-rubber with a wet knife, into the thinnest possible slices, and with shears divide these into threads as fine as fine yarn. Put a small quantity of the shreds (say one-tenth or less of the capacity of the bottle) into a wide-mouthed bottle, and fill it three-quarters full of benzine of good quality, perfectly free from oil. The rubber will swell up almost immediately, and in a few days, especially if often shaken, assumes the consistency of honey. If it inclines to remain in undissolved masses more benzine must be added; but if too thin and watery, it needs more rubber. A piece of solid rubber the size of a walnut will make a pint of the cement. This cement dries in a few minutes.

Chapped Hands.—A writer in the *American Grocer* asserts that to preserve the smoothness and softness of the hands, keep a small bottle of glycerine near the place where you habitually wash them, and whenever you have finished washing, and before wiping them, put one or two drops of glycerine on the wet palm and rub the hands thoroughly with it as if it were soap, then dry lightly with a towel. Household work and bad weather will not prevent your skin from being smooth and soft, if this plan of using glycerine is followed.

Damp Closets.—For damp closets and cupboards generating mildew, a trayful of quicklime will be found to absorb the moisture and render the air pure, but of course it is necessary to renew the lime from time to time as it becomes fully slaked. This last remedy will be found useful in safes and strong rooms, the damp air of which acts frequently most injuriously on the valuable deeds and documents which they contain.

To Fasten Loose Window-Sashes.—The convenient way to prevent loose window-sashes from rattling unpleasantly when the wind blows, is to make four one-sided buttons of wood, and screw them to the beading which is nailed to the casings of the window, making each button of proper length to press the side of the sash outward when the end of the button is turned down horizontally.

Soap Bits—To put to use bits of soap which are still too good to throw away, but are a nuisance in the soap dish, place all, even to the smallest pieces, in a small bag of flannel, and they will be found to make the most delicious lather for the bath.

To Fill Cracks in Stoves or Stove-pipes.—Use stove polish wet with turpentine; it should be used when the stove is cold.

Pisciculture.

Experience in Fish Culture.

BY SETH GREEN, IN THE CHICAGO TRIBUNE.

In the fall of the year 1837, while I was trout fishing in Canada, I saw some salmon make their nests in the gravel, and cast their spawn, and cover them up with gravel. I watched them two days, and made up my mind that fish eggs could be hatched artificially and at some future day I would try my hand at it. I watched the habits of different kinds of fish, whenever an opportunity presented itself. In the summer of 1864 I bought a part of Caledonia Creek, which is celebrated as a brook trout stream, and immediately began the construction of ponds, raceways, etc., in preparation for the approaching spawning season. When the time arrived, October 20th, I took my first spawn. At my first attempt I filled a milk-pan half full of water, and stripped the milt and spawn of the male and female in it. I examined them every day, and November 6th I could tell the eggs that were impregnated, and, by carefully counting, found that there was 25 per cent impregnated. I consulted Mr. Stephen Ainsworth, a gentleman who, I knew, had had as much experience in, and was as well read on, the subject as any one up to that time. I told him what I had done, the per centage I had impregnated, etc.; and he told me that was as good a per centage as had ever been impregnated in any country. I made up my mind that if I had to pick out 75 per cent of the eggs I took, I should not propagate many fish. I had a good many difficulties to overcome, and I thought to overcome this by experimenting. I tried first on the belief that one drop of milt was sufficient to impregnate a pan of eggs, which I found was a mistaken idea. I continued taking spawn in the same way till November 7th, when it occurred to me that, by using little or no water, the milt would have a better chance to act on the spawn. I accordingly took some spawn in the above way, and, November 23d, I found that, instead of 25 per cent impregnated, I had 97 per cent. That was the first improvement I had made, and I felt very much gratified, as I had accomplished something which had never been accomplished before, the thirty-second day I had been taking spawn. I practiced this dry impregnation for four years before I told any one. I sold the spawn for from $8 to $10 per 1,000, and it was as safe to me as though I had a patent right on it. During the four years my success had gone the rounds of the papers, and the Fish Commissioners of the New England States, hearing of my success, came to me and made arrangements with me to come to the Connecticut river and undertake the artificial propagation of shad. As Holyoke, Massachusetts, was thought to be the best point to begin operations, I accordingly went there. I arrived there June 29th, 1867, and as this was my first attempt at shad-hatching, my troubles were not few. My first experiment was to hatch the spawn on gravel—the same as I did trout; but as they were so much lighter than trout-spawn, it would not work. I tried numerous other experiments. Among my experiments I had a box with a sieve bottom, and as I was examining the spawn, I accidentally inclined the box so that the current, striking the lower edge of the box, caused a back-action, and the eggs began to boil up. This was just what I had been looking for, and I nailed cleats on the sides to keep it in the inclined position. This was the fifth day after I had arrived at Holkoke, and by this simple contrivance I hatched 15,000,000 in ten days. There had been a number of attempts to hatch shad by different parties years before, but all had failed because the spawn were so light they could not find any hatching apparatus that would hold them and give them circulation enough. This was my next great success, and it is worth millions of dollars to the country. There will be plenty of shad for all future time, and, if it had not been discovered, they were as sure to become extinct as all kinds of game. It will not be many years before all kinds of game will be gone in this country.

In 1867, and for years previous, shad had been selling for $40 per hundred. In the year 1870 shad were very plenty, and have been every year since. They have been sold as low as $3 per hundred during the last four years. I will copy an extract from the Fish Commissioner's report of the State of Massachusetts for the year 1871:

"The season was remarkable for the great take of fish in the river, which was the more striking because of the gradual decrease of the fishery for many years. On Sunday, May 21st, vessels in Long Island Sound observed the unusual spectacle of vast shoals of shad. The next day they struck in at about the mouth of the river, and filled the nets. At Lincoln, ten miles from the mouth, and on the coast, 3,560 fish were taken in one pound, (500 is usually a large catch), and the total yield for the pounds for that day was over 25,000. At Haddum Island, a short distance up the river, 700 were taken at one sweep of the seine, which is more than one-third the yield of a similar seine for the whole of a previous season. A seine four miles below Hartford took 900 shad the same day. As this is some fifty miles up the river, it is plain that the schools struck in all at once, and that those which headed for the stream kept on with great rapidity. Now, it does not appear that in the Hudson to the west, or in the Merrimac to the east, the run of shad was unusual. On the contrary, both rivers report a small average.

"Whence, then, this local phenomenon? The Connecticut people call them "Green's shad," attributing the increase to the artificial hatching of Seth Green at Hadley's Falls in 1867; and this opinion gets color from the fact that in 1868 the small yearling fish were unusually plenty."

Again, I copy from the Fish Commissioner's report of Connecticut for the year 1873:

"The number of shad annually running into the Connecticut river has increased to such an extent that the complaint of the fisherman is no longer of a paucity of fish, but that the market is so overstocked that they do not obtain a remunerative price for them."

Again, the Massachusetts report for the year 1873 says:

"Speaking of the past season, 1872, shad were more plenty and cheaper than ever. The New York market was so completely glutted with them that the dealers refused to receive more than a certain number at any price; the price was reduced from $18 to $3 per hundred."

In the fall of 1867 I hatched whitefish and herring, and in the spring of 1868 I hatched the spawn of the wall-eyed pike and red sides; the fall of the same year I hatched salmon trout, and stocked many waters with them, and have continued every year since I commenced to stock the small lakes with all kinds of bass and wall-eyed pike. I get good reports from nearly all of them. We have 647 lakes and ponds in this State, (New York,) and every one of them is capable of furnishing a fish dinner for every family living within five miles of any one of them. When I commenced experimenting on hatching fish on the Connecticut and Hudson rivers, I was called a lunatic, and was treated accordingly. I have had a dozen men standing on the banks of the river, hooting and calling me all sorts of names, and they would break any of my apparatus that I was experimenting with, if they could do so without my seeing them. I have lived to see the day that I am not called a lunatic in the above mentioned places.

I believe artificial propagation of fish-eggs will be practiced for all time to come, and all our rivers and lakes, great and small, and the ocean, will be stocked equal to the best, by the above method.

Pomological.

PRODUCING AND MARKETING FRUITS.

MR. J. M. PATTERSON, one of the most experienced, practical and successful prune orchardists in our State, writes the following chatty and instructive letter about producing and marketing fruits. He knows whereof he speaks in this matter, and his word may be regarded as authority:

EDITOR AGRICULTURIST:—I noticed in the November number, Mr. Settle's experience in fruit drying with the Alden fruit dryer. I think at the time I made out that the Drying Company made five hundred dollars more than the producer on the Petit prune. Now I think that amount ought to have been divided between the producer and the dryer, as one cent and a half is pretty low to pay for our fruit. I wish, also, that Mr. Settle had given the price of land, and how many years it took those trees to come into bearing to bring the amount there stated per acre; also, the interest on the money invested in the land, and what could be raised between the trees until they came into bearing. It would have been what a great many who are coming here want to know. I think none of the land those prunes were raised on could be bought for less than four hundred dollars per acre, unimproved. I had the privilege of examining the prunes after they were dried, and pronounce them a good article—the best I ever saw dried with hot air. They ought to bring not less than 15 to 20c per lb., as such retail for 25 cts. per pound. There ought to be three or four such dryers in San Jose.

I dried quite a lot of the Petit prune in the sun, also the Gross prune, that were too ripe to ship to San Francisco. I will send you a sample, and would like to have your better half break them open and examine them before cooking. They must be put on the back of the stove, to simmer, they should never boil, as they were ripe; boiling spoils the flavor.

Some object to sun-dried fruit, as the worms get into it. I have kept such three years and no worms ever got into them. Keep out of a sack, out of the house, away from moths, in a place where the light and sun can get in, and there will be no worms in sun-dried fruit. To be sure, I let on steam from a boiler for a few minutes before packing; this makes the fruit look nice, and destroys any larvæ that might be there. I don't want it understood that I have anything to say against hot-air dried fruit, as we want more of it, and dealers only want to know where they can get a supply for their customers.

A great many are crying: "The fruit business is overdone." Why, Mr. Editor, we as a State are only in our infancy in fruit raising. First raise the right variety for shipping, then put it up in good shape for market and it will always sell. I noticed a great many of our papers this year told about so much fruit rotting on the ground. I think I had not over one box go to waste this year of the immense crop I had. I got, even in September, when the market was glutted with fruit, one dollar a box of 20 lbs., for the

FELLENBERG PRUNE.

In speaking of this variety, I would say they will ship East without being wrapped in paper; only put a sheet of paper between the layers, and they will keep three weeks after they arrive there. This has been tested this summer, and as soon as the people East find out its qualities, there will be a large demand for it. For drying, there is none better, as it pits nicely, being a free-stone, and of excellent flavor. The

GROSS PRUNE

Is also saleable. Although a cling, yet with Mr. Tarleton's pitter this will pay well to dry, even should the market get glutted with them. On my trip East this year I took a great deal of pains in making inquiry which variety of plum or prune is in most demand. The answer always was, THE GROSS PRUNE, as it was the largest size. This year this variety has been tested and will carry nice and in good order by freight train, always admitting that they are just right and beginning to color when picked, are handled carefully, and are a No. I article.

Here let me say, Porter & Brother, Chicago, get fifty cents per box *more* than any other shippers East, as their fruit is all selected. This is almost enough above the average to pay the producer for the fruit! I would also say, they do not want dried prunes East with pits in, They want *pitted* fruit, and a No. 1 article, and there is no end to the demand for best dried prunes. There is too much poor trash dried and put on the market. There is no use of having a poor article. Graft the trees now bearing poor varieties, and in two years you can have a No. 1 article.

There is no use in orchardists in Santa Clara valley raising early pears, or Bartletts, for shipping East, as they are too late, and come in competition with the peach market. Here, for profit, we must raise *late* pears—a few varieties only—Winter Nellis, Easter Buerre, and Beurre Claergeau. The Easter Buerre must have soil adapted to its wants, as they don't do on every soil. This can be ascertained before planting from those that have them. The Easter Buerre stands high in market, as they are large, and can be kept through the winter in cellars and ripened up as wanted. They must be produced in the coast counties to keep long. I found Bartlett pears selling East for California pears that were raised in the Southern States. One glance showed that they were not California fruit. We should produce nothing, and put up nothing, but A No. 1 articles, either dried or green.

BEST VARIETIES.

For shipping, a few varieties only. For drying plums, the Columbia and Gen. Hand. Prunes, the Gross d' Argen and Fellenberg. The Petit they don't want East, owing to its inferior size. The best plums for canning to ship East are the Green Gage and Magnum Bonum. They paid me at the San Jose Canning Factory, in '76, one cent per pound on the tree for Green Gage—not very encouraging. Magnum Bonum two cents per pound. The reason of this is, the canneries put up the Imperial Gage, a very inferior article, and mark it Green Gage. Of course our eastern merchants will soon find that out, as I found some had already. Such a thing, Mr. Editor, is what is going to put a damper on the fruit business.

I saw a few days ago some Green Gage plums that were put up *in London* and shipped to California! and the cry is, "the scarcity of money and the hard times." The same can be said of raisins, nuts, and all kinds of fruits. This State can raise all such things to supply all of the United States, and will, as soon as the farmers East can take their *greenbacks* and come here. That is all they are waiting for. Nearly every one I conversed with East, told me that was the trouble about coming here. Here is a chance to settle the Chinese question. If our government is not better than gold, it is not worth much.

I noticed an article in the San Jose *Mercury* of December 23d, from the San Francisco *Bulletin*, saying that old-time shippers objected to the

REFRIGERATOR CARS,

As what fruit that would pay to ship East could be shipped in the common cars, and would do away with the ice. As far as pears are concerned, they will go very well; but for peaches, plums, apricots, prunes, and grapes, it will pay to send in ice, and the ice can be put in at the stations while the cars are oiling up, say three or four times between here and Chicago. I took the trouble to enquire at the stations the price of ice, and find it can be bought, after being iced on starting, on an average at $6 per ton. If put in at different stations, ten tons of fruit can be carried in a car with ice. The fruit should hang on the tree until nearly ripe, and can be carried through at a temperature of from 34 to 35 degrees, and if obliged to lay on a sidetrack for some time it will make little difference as long as the ice is kept in. I mean in the refrigerator that was on exhibition at the Centennial. Allegretti, an Italian, is the inventor, and I understood that Wheeler & Wilson, the sewing machine men, were helping with means to introduce it. The fruit carried in this refrigerator car will have its natural flavor when its gets there. This refrigerator has no blower, and as for the fruit sent in ice not keeping after it arrives there that has also been attended to, and there are stores prepared with refrigerators where the cars can run alongside and discharge. A sample of the fruit can be seen by buyers. So don't let us hear that the change of temperature is too great for fruit to keep after it arrives, as it can be kept almost any length of time. The only trouble is to get the railroad company to put the freight down so low that trains of these cars can be run over the road, and the merchant can sell the fruit so low that the people can afford to buy it. Here is where the trouble now lies. For instance, prunes that sold in San Jose for 50 cents per box of 20 pounds each, I saw sold East at from four to five dollars per box. Pears worth here 70 cents to $1 per box, sold there at $6, $7, and $8 per box. I mean a No. 1 article.

REMARKS ARE USELESS.

Of course it will take some time to regulate these things. When freight gets to Omaha it is all right as to time, as there are four companies waiting and anxious to get the first hold. Even the passenger trains are switched off and the cattle cars go ahead, there is so much competition to get freight. Those companies are willing to pay a fair rate per mile to bring these cars over the C. P. and U. P. roads.

Public Economy.

THE PEOPLE'S BEST INTERESTS

IS it not of as much, or more importance to the producing masses, that we have an economical and just government, as is the knowledge of how to produce wealth? Of what advantage is wealth to the man who has produced it, not for himself, but for some money lords who hold him as completely in their power as though he were their slave? Is it not time that the people become awake to the great issues of the day, and comprehend the true condition of things as their own interests are affected? Is it not time that we all strive to inform ourselves as to our duties to ourselves as citizens, and to our government, which means to our whole people?

As sure as a free and just government depends upon the people themselves, so sure are the people responsible for all the wrongs and abuses that they will either tolerate, submit to, or neglect to correct. We have faith that there is enough virtuous desire for a good government resting with the people, to correct the evils that have grown into power, if the needed intelligence upon such matters be sought, and the facts of our present condition and needs be comprehended.

We propose to devote a department each month to this object, believing that it is our duty, and the desire of the honest masses.

Must the People Starve.

"A note of discord in the festivities of the holidays. The wolf gaunt and hungry lingers round the doors of hundreds of our city homes, and stalks grimly behind the garish show of wealth on our streets.

"There are 10,000 people out of work and bread in this city, with nothing in the world to keep soul and body together. It is a stern grim fact that *will not down*.

"The notes of suffering, at first heard faintly are harsher and louder."

The above is from a Buffalo, (N. Y.,) paper, and a similar cry is echoed from every city in the Eastern States.

And this breaks in upon the music swelling merrier and louder in the halls of revelry in our national capital. Here in the frozen winds of winter flutter the thin rags of the starving multitudes. There, the only care is a rivalry in diamonds and laces, wines, costly as Cleopatra's pearls, cordial, flowers worth the homes and lives of many an American citizen; luxury unbounded.

Salaries are still too low for our officials. Some new tax must be contrived to wring a little more from the aching hands of toil. On with the dance! Draw the silken curtains; shut out the groans of the hungry; feast your eyes on the glitter of costly apparel. Hush! Hark!

You have mistaken the time for imperial usurpation and costly display.

The people are patient, very patient with the ridiculous follies of our Republican apes of royalty, but it has come to earnest crime: all this robbery of the people has come to *murder*; yes cruel murder at last, by the most miserable of deaths, starvation.

Famine cannot be chained by statutes. Never say "It is not I." Thou art the man.

The millions of money the toiling multitudes have paid to bondholders would have saved them this great wrong: not only the pains of hunger, but the humiliation of becoming the recipients of doled out charity. Oh if you, and you Congressmen, could only be compelled to live, day after day, on the scanty dole of soup, pompously dealt to your outstretched, begging hand, it would be but poetic justice!

What did you do? You sold, mortgaged the toil of the people, the industries of the whole country to the moneylenders, for a *bribe*. Thieves, swindlers, *you* have robbed toil of its just returns, and yet you dare appeal to the people who are your victims to keep your part of the contract with your bribers, and yet farther to starve and toil to make good your promises that no money but gold shall be legal, and they who have the gold to sell are your masters.—*Oakland Cal. Legal Tender.*

THE grasping gold lords of Europe govern this country in all things which affect their interests, and it is to their interest to be continually "on the make." They have succeeded in demonetizing everything but gold, and they control all or nearly all there is in the world of that, or, in the slang of the day, they have 'cornered" it, and now have laid their plans to control or own every other production or kind of property, and direct the legislation of the States in such a manner, through the instrumentality of bonds and banking institutions, as to absolutely, for all practical purposes, own the country.

The Future Legislation of the Country.

The people of the United States are oppressed to death with taxes, tariffs, high rates of interest, patent office royalties, and monopolies created by class legislation by the Federal and State governments.

No people on earth are more governed and pay so high for it. It costs every American citizen in our States about eighteen dollars per head for the privilege of living in the country one year, This is a grievous burden to put on every man, woman, child, Indian and negro who claims to be a citizen. It takes, consequently, about eighty dollars to every head of a family to clear his tithes for being governed. In England, the people, on the same basis, pay about six and three-fourth dollars per head; in France, seven and one-fourth dollars; in Prussia, about eight dollars; in Austria and Russia about eight and three-fourth dollars.

The exports of the United States, which represents the surplus of the country, is in round numbers about six hundred and forty-five millions of dollars a year—that is, the entire surplus of the country only pays about ten months of taxes, and leaves two months each unpaid for. This two months' deficit, or one hundred and twenty-two millions of dollars, is obtained by the moneyed tax receivers, who are to be bond holders, by forced sales of lands, houses, mules, horses, cattle and other property each year. It is not at all astonishing when we view these figures that we hear "hard times," "hard times" repeated everywhere among the laboring classes.

The tax burdens are not much more oppressive to the working man than the unjust tariff laws that forces every man to give a full tithe of his labor to certain pampered industries, under the pretence of protecting manufactories. But even the tariff is less burdensome than the royalty taken from the people each year by the action of the patent office laws. The people pay royalty enough each year to pay off one-fourth of the national debt.

As they suffer from the patent office laws, so they equally suffer from other monopolies, among which are giant railroads and national banks, each of which every year rob the labor of the country of enough to pay the interest on the national debt twice over.

But perhaps the most grievious evil of all is the high rates of interest allowed in the different States for the use of money, and upon bonded debts and accounts.

The injury to the laboring classes from this source are absolutely appalling. A moneyed aristocracy has already grown up in our New World, through the influence of usurious laws, which in power has now become so great as to sensibly influence every branch of our law-making machinery. The judiciary, by this same money power, is so far influenced that it is next to impossible to get a decision on any constitutional or statutory question which is detrimental to the interests of the money cliques and dealers of the nation.

Now, what the peopled want, above all things else, is reform on all these points, and the subordination of the moneyed cliques and monopolies to the public good.

We want, as nearly as we can get it, free trade, low taxes, a sound national paper currency, with no issues of money except by the National Government. A patent office wherein all royalties on inventions or discoveries shall be controlled by law, and a rate of interest or usury not to exceed in any State of the Union four per cent., or the average net gains of the leading industries of the country.

It behooves our voters everywhere to study these questions attentively, and then to act wisely, and then to see that no man is elected to any law-making office unles he stands pledged to carry out the views which are to benefit the great working classes, and not the moneyed sharks of our large cities. We do hope the people everywhere will think well on every vote they give hereafter, until low taxation, low rates of interest, free trade and just laws, administered with rigid economy, will make us the most prosperous and wealthy people on earth.—*New York Mercantile Journal.*

A GREAT WANT.—"A great want of cheap labor." What for? Why, quite a number of capitalists are hankering after the proceeds of other men's toil, and if men earn enough to live well they get strong and saucy. It is better to have gangs of weaklings who will work for little and remain too hungry and abject to desire a voice in the government! There is a great want of servile, cheap, embruted men—a great want of cheap labor! Who wants it? Is it the working men? They are the majority, and should have the say-so.—*Legal Tender.*

ONE HALF the world is not spurred and booted to ride the other half. The half which would stand back with folded hands giving words of command are cheating themselves when they endeavor to cheapen the wages of the other half. They are really in doing so sowing the seeds of their own destruction. Nothing is so dangerous in society as the ignorant class. Cheap labor means cheap food, which dwarfs men morally and intellectually. Cheap labor forces men into ignorance, which is the mother of vice. Cheap labor means that the tax for support of penitentiaries must be increased; that reform schools shall multiply. We not only do not want cheap labor, we want less hours of it. Cheap labor brings in its train of evils a disposition to grab large tracts of land. Cheap Chinese labor will make rich men richer and poor men poorer. For perfect development of the race each man must labor, each man must do his individual share in the muscle work of society. There ought to be no mudsill. It cost this country thousands of lives to destroy the system of slavery in this country, which was built up on the mudsill theory. If in a community of 100 citizens 50 arrogate to themselves the brains and seek to control the muscles of the other 50, they will in the end either have an abject race or they will have revolution.

The Vineyard.

INDEPENDET OF DROUTH.

A PRODUCT that is not affected by the drouth, on this coast, one that can be relied upon in any season, is something that, on this account alone, should commend it to the attention of farmers generally. The grape vine will flourish equally well in wet or dry years, and the fruit is even richer in sacharine qualities in dry seasons. A good vineyard on every farm would be a source of profit at all times, and to be relied upon when all other crops fail. The value of grapes for food while fresh, and put up fresh in cans, and cured into raisins, is not yet generally appreciated by our people. In some parts of Arabia, grapes are often the principal food of men and domestic animals. Long journeys are performed by men and horses with little or no other food. There are few single products of greater value as food than the grape, containing as it does all the elements of nutrition needed to sustain life and strength. A good raisin vineyard on any farm, where grapes will do well, can be made to pay as well as or better than any crop upon the same acreage, and while civilization exists there will always be a market for raisins at good paying rates. With such a vineyard, of fair proportions, no matter how dry the seasons, a farmer need never be without a revenue that will insure him from want.

We will here call attention to the matter of planting vines, especially to raise grapes for swine. These could be cultivated in convenient places in grain fields where hogs are pastured and fattened. If the porkers can have grapes to run to while fattening on the grain, they will increase in weight much faster, be healthier and make better pork, than upon dry grain alone. The common Mission grape would probably be as good as any for this purpose, as the vines are vigorous and the production of rich fruit is large. Whenever we go out among the farmers, it is a wonder to us why the majority of them have no orchards or vineyards. It seems as though they have not yet commenced to know that they are in a civilized country and have the power and right to partake of fruits "under their own vine and fig tree."

If the season prove too dry to plant an orchard, plant vines anyway, this season, and have a vineyard of your own. Cuttings should be planted deeper in a dry than a wet soil, but will grow if properly planted.

A Model Raisin Vineyard.

Says the Stockton *Independent:* We recently paid a visit to the vineyard of the California Raisin Company, in Placer county, a few miles north of Rocklin. The company started some three years ago among a number of San Francico capitalists, who propose to test to the utmost the capabilities of California for producing raisins, and in order to do everything with all proper thoroughness no money has been or will be spared in perfecting all the conditions for success. The first step was to lease a tract of land in a favorable spot for fourteen years, the owner of the land taking one-fourth of the stock, and, as President of the company, overseeing all the arrangements. The spot selected could scarcely have been better. It is a long, narrow valley, with a southwestern exposure, surrounded by high hills that completely shelter it from severe storms or high winds. When the company began work the valley was covered with a heavy growth of oak trees, which required to be cleared away. They first commenced with 225 acres, which they surrounded with a rabbit-proof fence. On the hillsides above the fence a berme ditch was dug to prevent the storm waters from deluging the vineyard. The plowing was most thoroughly done. The first breaking was done with a single plow to the depth of eight or ten inches. It was then cross plowed a little deeper, and followed up with a subsoil plow that stirred the ground

TO A DEPTH OF TWO FEET.

It was pretty well pulverized by this time, but it was then cultivated and harrowed. The value of this treatment is manifest in the fact that at the time we visited the vineyard, just before the first rain of the season, when there had been no rain or dew for six months, we could kick up moist earth but a few inches from the surface, and the soil was light and fluffy, while in the same soil just outside the vineyard one might dig down to bed-rock without finding any moisture. This thorough plowing was given three years ago, and it has never required anything but light cultivation since to maintain the pulverized, loamy condition of the soil. The soil, which is about six feet deep over the rock, is doubtless formed of disintegrated granite, enriched by the growth of the trees upon it. After this thorough preparation of the soil the vineyard was carefully laid out for a convenient

RAISIN VINEYARD,

By leaving about twenty acres for drying ground in patches of about one acre each, taking advantage of every knoll with a sunny exposure. The vines are laid out with the utmost precision, the rows being eight feet apart and as straight as a chalk mark, with roadways of greater width at short intervals. The vines selected, which were started from cuttings, are of the variety known as White Muscat of Alexandria, which they consider the best for raisins. Many of the vines bore fruit this year, and next year the company can begin to dry raisins. The preparation of the drying grounds is the next consideration to be

attended to, and will involve considerable expense. The plan to be adopted is that pursued in Spain, the home of the raisin. The grounds are to be subdivided into comparments of perhaps 8x16 feet, each to be surrounded by an adobe wall abont two feet high, the floor to be prepared and made smooth with adobe, and each compartment covered with a canvass drawn over at night. The adobe will thus retain the heat of the sun during the day and by covering it up the heat will be longer retained and the raisins continue drying through the night. This vineyard has already cost about $70 per acre, and will perhaps cost $30 or $40 more before any revenue is derived from it. The experiment on the thorough and extensive scale pursued in this undertaking is an interesting one, and if successful should be eargerly watched by all the vineyardists of the State. There is one lesson shown by the lusty growth of the vines and the moist and pulverized condition of the soil throughout the year, which can be of use to every farmer or tiller of the soil in the State, no matter what his occupation, that is, the dread of drouths can be obviated by thorough cultivation of the soil, and the urgent need of irrigation can in many places be entirely done away with by thorough and deep tillage.

MAKING RAISINS.

There is much encouragement in the good results of attention to the business of the past season or two, to believe that the raisin-making interest will soon be one of the most important industries of California. Mentioning the failure of the San Joaquin foothill vineyardists to find profit in wine making, the Stockton *Independent* says: During the last two or three years, however, several owners of mountain vineyards have turned their attention to the production of the raisin grape, and in most cases the experiments have been successful. We lately visited the ranch of L. F. Jarvis, near Columbia, Tuolumne county, and saw a large quantity of raisins made from this year's crop of grapes that would compare favorably with the imported article. Mr. Jarvis finds that he White Muscat grape is the best for raisins, and he this year raised about ninety tons of this variety, all of which he converted into raisins by drying the grapes in the sun. He has extensive platforms erected on the hillside, sloping toward the south, on which he spreads the grapes, and if the weather remains pleasant nothing more is necessary until the grapes are dried ready for boxing. In case of early rain, such as we have had this year, he is prepared to throw a temporary roof over his platform to protect the drying grapes from the storm. His grapes have dried without any difficulty and the raisins produced will sell readily in market. Mr. Jarvis is, however, of the opinion of most of those advocating the developement of this industry have overestimated the product of raisins from a given quantity of grapes, his experience proving to him that it will take about five pounds of grapes to make one of raisins, yet the grapes are then more valuable for raisins than for anything else.

Cannino beef is becoming quite an important industry in Oregon and serve to keep the salmon canneries employed during what would otherwise be the dull season. A corespondent of the *Oregonian* says: The Cutting Packing Company are packing beef in cans. Under a contract from England, they are packing daily from 40 to 50 beeves supplied by the Portland slaughterers.

Educational.

Boil it Down.

Whatever you may have to say, my friend,
Whether witty, or grave, or gay,
Condense as much as ever you can,
And say it in the readiest way;
And whether you write of rural affairs,
Or of matters and things in town,
Just take a word of friendly advice—
Boil it down.

For if you go spluttering over a page
When a couple of lines would do,
Your butter is spread so much, you see,
That the bread look plainly through.
So, wh-n you have a story to tell,
And would like a little renown,
To make quite sure of your wish, my friend,
Boil it down.

When writing an article for the press,
Whether prose or verse, just try
To settle your thoughts in the fewest words,
And let them be crisp and dry;
And when it is finished and you suppose
It is done exactly brown,
Just look it over again, and then,
Boil it down.

For editors do not like to print
An article lazily long,
And the general reader does not care
For a couple of yards of song;
So gather your wits in the smallest space
If you want a little renown,
And every time you write, my friend,
Boil it down.

THE FREE AND INDEPENDENT NEWSPAPER.

BY A. GAYLORD SPALDING.

DEAR EDITOR: You will please accept the friendly greeting of a once active typo brother, now for some dreary years prostrated by cruel calamity, and laid on the low couch of helpless retirement. An editor is apt to find "Jordan is a hard road to trabel, I believe;" especially if he ventures to run a wide-awake, forcible, free and independent, greenback, labor reform, temperance journal, in a new country, of wild land, wild game, and fast people, against the rushing tide of blind and reckless money power and popularity, amidst the dense fogs of party and sectism, ignorance, prejudice, antiquated custom and old Madam Grundy; and he naturally craves the warm sympathy of his fellow craftsmen, and of all high thinking minds. Who can possibly ever be a bit free and independent, or how shall we win our honest bread and butter? It is a serious conundrum.

It takes a hero for a pioneer in the type wilderness, as well as with the plow, to break the grubby field, and no puny or timid hand can ever accomplish great things. Few have the nerve to strike.

And realizing this most discouraging fact, you probably, at the outset, counted the heavy cost, and made up your mind for manly struggle and a valiant battle. We fight the idol-gods of party, sect and monopoly, in defense of

LABOR AND THE WORKINGMAN.

The newspaper is a universal necessity, if Hottentotism is not the settled law and gospel; and, wherever you find refinement in society, with mental development and moral rectitude, and external polish and attraction in houses and lands, you may be quite sure the good newspaper is scattered freely around.

And, furthermore, if new departures are opening up, on finance, trade, politics, government, social philosophy, science, sensible religion, temperance, woman's freedom, Sunday freedom, and labor reform, with a new century, new clothes, new ideas and new "everydings" to correspond, it is pretty evident that the lively, audacious, independent, truth-telling editor is making things boiling hot generally, and stirring up the dry bones of rusty old-fogyism, ancient hard-shell superstition, Beecherism, bloated and rotten monopoly, and supercilious, self-styled uppertendom. So, if your toiling millions are proud of themselves, and of their homes and country, and ambitious to shine and excel in the elements of true civilization and laudable aggrandizement, they will be very proud of your heroic and beautiful magazine, and subscribe liberally and write abundantly. Come on, then, friends; come on *now!* Your clean, bright and burning columns, never choked up with fawning toadyism, party cowardice, selfish compromise, or bigotry or prejudice of any kind, will welcome and encourage a most free and fearless correspondence, which should characterize all American journalism in the present glorious opening new century of our proud national history.

I place the newspaper, always, at the very head and front of every public enterprise and institution; and, say what you will of professions or professional men, in any department of civil life, ers, the newspaper ranks far above and outdoes them all; because it comprehends, includes and represents them all. It is king of kings and lord of lords; for it is, indeed, the brains of the world, condensed — a real live schoolmaster abroad, and mighty educator in every family, as well as

PREACHER, LAWYER, AND DOCTOR,

And missionary at large. It is, in fact, the grand brain ventilator and brain thermometer of all humanity—mental, moral, and social—and is *so extra cheap*, that none but very foolish or careless men or women will ever consent to pay any professional fee, or kiss the great Tox: because the really sharp, free and independent newspaper naturally makes every live, earnest and wakeful reader also independent. Then read, read, read, every one, and think, THINK, THINK!

Wonderful upheavals, evolutions and revolutions, are marking our period, with the convulsive throes of regeneration, gestation, and a new birth, social and national. It is the

WORLD'S MIGHTY LABOR EPOCH,

And the working class everywhere, (the true, practical democracy,) are called to dignity, honor, self-respect, and a spirit of independence.

Human toil is no longer classed with the forced draft of the horse and the ox, but is the voluntary choice of the highest manhood, which scorns the sneers of haughty wealth, pride and ignorance, and stands up independent — making *labor*, not money, the enduring cornerstone of all government and society, and the chief virtue of all politics and religion.

Workingmen and women claim all that salary-grab presidents, or congressional, or cabinet, or lobby thieves steal, eat, wear and waste; and may the time soon come when the blue-blood money aristocracy must step down and out, because it will be out-voted. All the world belongs to the workers, and the shining newspaper is their

GRAND GABRIEL'S TRUMPET,

With *co-operation* for the magical password! The best interests of honest men and women will be advocated, and the evils that oppress us will be as boldly attacked. Let real reform be triumphantly advanced. So, now, bravo for the rushing nation emancipated! Dear, toiling brothers and sisters, just save up your loose dimes, and subscribe at once for the free, brave and independent newspaper—the

CALIFORNIA AGRICULTURIST!

It is now the bright morning of the new century and of new-born independence, and the happy year of jubilee for independent manhood, independent labor, independent temperance, independent religion, independent greenbacks, and independent farmer's and workingmen's homes.

Champlin, Minn., Jan. '77.

Farmers and Newspapers.

I have been frequently surprised to see how many well-to-do farmers neglect or refuse to take some good newspaper for the benefit of themselves and families. They seem to think that they have no interest in the doings of the outside world; that they have to deal with nothing except the land they plow, the stock they feed, and the children they are rearing in ignorance. They forget that they are a part of the great human family, placed upon this orb to work out the plans of the Creator, and as such have no right to dam up the stream of progress. The laws of progression are as unalterable as are any others in nature, and that man who impedes these laws with an offspring of uneducated children, remains a sin which reacts not only on himself, but on his descendants for long years in the future. Newspapers are made to spread intelligence and improve morals. To the farmer, above all men, they should be a necessity, from the fact that they afford him in his isolated condition the only means of mixing in the busy scenes of life. Man in a hermit state becomes a personification of selfishness—caring for nobody and nobody caring for him. Development comes alone from associating with our fellow men, and appropriating to ourselves the advancement which they make. No farmer should do without this social schooling, both for his own good and that of his children. In no other way can he obtain it so fully and so cheaply as through the periodical literature; and he who neglects to receive these advantages deprives himself of light, and lives out his days in worse than heathen darkness.—*Otis Tinkham in Country Gentleman.*

Knowledge is Success.—Every man must feel that the greater the amount of knowledge he can bring to bear on his business, the greater will be his success, provided the same exertion is used in the one case as in the other. It is absurd to say that it is a disadvantage to one's business to learn all he can about his business, and yet there many persons who maintain that reading about farming is of no profit, though the same persons will ask and follow the advice of competent farmers in their own neighborhoods. In other words, according to them, the advice is good if communicated orally, but if conveyed through a newspaper it is worthless. This unreasoning and senseless prejudice, we are glad to know, is rapidly passing away, and many men who, ten years ago, felt an opposition to and scoffed in derision of agricultural works, are now the most ardent supporters of them. As the light of knowledge advances, the clouds of ignorance, error and prejudice are dispelled, and science, with its ever-widening and ever-varying horizon, throws forth light upon every department of human industry, and most of all upon the business of agriculture.

Mothers are the Real Teachers.—They have in their hands the moral guidance of their boys till the latter are at least twelve years old, and of their daughters till the latter marry. If mothers do their duty, their sons, in all but exceptional cases, will grow up good and honorable men. It is because lads

are not taught at home, and taught by example as well as by precept what is noble and right, that they so often go astray. But even if there is some excuse for a son not turning out well, there is hardly any in the case of a daughter. Bring up the girl to be a good wife and mother; give her the solid acquirements that will enable her to fill those positions properly, and she will make herself and others happy. But devote too much time to mere accomplishments, and you render her vain and frivolous. Of course, a girl ought to know how to attract as well as how to keep; how to win love as well as to retain it. Do not, therefore, make her too prosaic. But on the other hand, remember that accomplishments are not everything.

Hygienic.

HOW I TREATED MY BABY IN DIPHTHERIA.

BY "JEWELL."

OURS was a very bad and dangerous case. The baby, only seven months old, when first taken with sore throat was feverish and fretful. A hot bath, flannels about the throat, and a day of quiet and careful nursing—keeping him as comfortable as possible—seemed to break up all symptoms, and the little one appeared well. A change of weather, and the little fellow took a severe cold, and three days after, the diphtheria in a most violent form—a relapse—was the result.

Even now I tremble as I recall the days and nights of anxiety and watching,—yes, and prayer, too—for guidance to apply remedies best suited to the symptoms, and in this way save my darling's life! Having been successful in one of the worst cases, complicated with inflammation of the lungs, I feel it a duty to tell other mothers, that they may do likewise, in case of like disease, and save the lives of their children, perhaps, for few doctors are successful in the treatment of diphtheria, and *everything* depends upon the careful, discreet nursing of the mothers, after all.

To begin with, watch your children closely, and if the throat begins to swell or the glands behind the ears, and under the jaw, apply hot fomentations of salt water.

A THROAT WRAPPER

Of flannel, made by sewing one or more square pieces of thick flannel to a longer piece, so as to go about the neck in the form of an apron is an excellent thing. Under this you can apply either cold or hot as the case may be. Two are needed that one may always be dry. In fomenting use flannel wrung out of hot water. By placing a towel outside the wet cloth you will find your hands will not come in contact with the heat as you wring it and it can be wrung much dryer. It is not the moisture so much as the *heat* and *steam* that we want. In cold applications use old linen—wring dry, and apply frequently—of very cold water.

See that the feet and hands are kept warm —give a hot bath (103°) once a day, and if there is much general fever, a sponge off under the clothing with tepid water is very refreshing.

Don't fail to give the child, or even a nursing baby, *plenty and frequent drinks of cold water*. My baby preferred water, ice water at that, to the breast, and when I could hear the phlegm rattling in the throat and a difficulty of breathing, I would put a piece of ice in his mouth, which would gag him and make him throw up. Be ready then to take all the mucus out of the mouth with the finger, as infants have a tendency to swallow everything in the mouth. A very good gargle is made of borax water, salt water or chloride of potassia water, with one-half glycerine. Make a swab of soft linen, tied on the end of a penholder or stick, and after swabbing the throat out every two hours or so, rinse the swab in fresh cold water before putting back in the gargle mixture—no matter if a little is swallowed.

Complications of various kinds will occur. Retaining the urine, or painful urination, is one, for which use hot fomentations over the bladder, or dry *hot* flannels, are good—also, use a tea made of steeped watermelon seeds, which is simple and effective.

I would be impossible to enumerate all the symptoms of diphtheria in this article, as they vary according to the condition of the patient; but most mothers can read the symptoms in their little ones if they will be watchful, and a very safe way to do is to give a *hot bath*, no matter what ails the little one, and next an injection of tepid water, thus freeing the skin and bowels, then wait and see what symptoms follow. *Keep the child quiet and let it sleep all it will.* For two weeks we did not speak aloud where our baby was. *Keep the temperature even*, about 70°, night and day, though have abundance of *fresh air without draughts* in the apartment.

Let there be but one nurse, and plenty of *assistants*, that she may be waited on, and be able to sleep when the patient sleeps. Above all, keep up good courage and have *faith*. *Remember, drugs do not save life*—it is good nursing and care. The best of physicians admit this.

When the fever was finally broken, the perfect prostration was like unto death in appearance. An abundance of pure air, warm clothing and wrapping, keeping the feet and hands warm, and allowing the child to rest, was all we could do—all that was then necessary. Aiding nature, by making all conditions as favorable as possible, is proper treatment in any case. Depend upon good treatment, not medicines, and there will be much less danger of loss of life from any class of diseases.

1776—"Farmer at the plow, wife milking the cow, daughter spinning yarn, son threshing in the barn, all happy to a charm."—1876—"Farmer goes to see a show, daughter at the piano, Madame gaily dressed in satin, all the boys learning Latin, with a mortgage on the farm."

WORK has commenced on a canal thirty miles long and 120 feet wide, for irrigation and navigation south of Tulare Lake. The grade is to be an inch and a half to the mile, but half an inch would be much better for the preservation of the banks in a soil of sandy loam. It is to irrigate 60,000 acres of land, and is to cost $150,000. There are few places where so many acres can be irrigated at so little expense.

THE results of irrigation along the Fresno river near Borden have been satisfactory in the highest degree, and tend to prove the wisdom of the policy of flooding the land with water in the winter season, when the rain falls are light. It is the belief of farmers who note results carefully that the system of irrigation is gradually working a change in the climate, by producing heavy dews at night and adding to the moisture of the atmosphere throughout the dry season.

Household Reading.

FAMILIAR TALKS---No. 2.

BY M. E. T.

"OUT OF THE WILDERNESS."

WELL, here is hope at last," said Annie, lifting her tired hands, and emphasizing her words by a downward thud on the open pages of the AGRICULTURIST. Poor child, she had been working hard all day, and was just then enjoying a momentary rest.

"Yes," I said wearily, and sought for myself a more comfortable position on the lounge, "is it some sure and speedy cure for diptheria?" for I was very sick and had a bad sore throat, and was consequently thinking more of that than anything else. For answer, she read me from Luip's pen January number, "To Toil and to Spin," and, in conclusion, she said:

"I shall certainly call into exercise this wonderful power of which, at present, I am so ignorantly possessed. I hope the editor, for the sake of suffering humanity, will permit our friend to tell us how this great remedy is made practical. I am only twenty and already gray hairs are found on my head—hairs that 'caring cares, baffled hopes and chilled aspirations' have whitened before their time."

The door opened and shut. I heard click of dinner dishes, and knew that the the tired hands were again busy. My thoughts ran back over the dear child's life, so kind, so patient and true. I thought of her cherished hopes and desires, of her consuming thirst for knowledge, of her love for everything beautiful, her lofty ideas and sensitive nature, and I did not wonder that the signs of warfare were visible, fighting as she does against such mighty odds, and still this brave girls says, "I thank God that I am what I am," and goes on working and struggling and hoping.

That these things are all right and best I know not; but I do know that uncontrollable circumstances are shading a thousand brows to-day, no doubt many of them young and fair, while we are powerless to direct them, simply because we can see from but *one* stand-point, and that one *our own*. Then I think we all know that children must suffer for the sins of their parents. My pitying heart tells me that there are hundreds of fair Southern maidens, bright in intellect, whose prospects are blighted through no fault of theirs.

Go back through generations and let history show who thrust the curse of slavery upon our fair land. No doubt, had slave labor been profitable in northern States, we should to-day be equally guilty. While I thank God day and night that such a wicked practice no longer exists, I can feel in my heart only pity for those Southern people who have yet to learn what our Northern people are bred and born to, viz: to help themselves; but so far as I know I think our Southern sisters are doing wonderfully, and we should love to aid them through our advice and longer experience. It is time that envy and malice were buried forever out of sight.

As to "drudges" and ways of looking at household work, there seems to be very muddled up opinions concerning them that are more or less distressing to women everywhere, both North and South, East and West. But of course those who can bring to bear the greatest amount of common sense in dealing with the realities of life, are surest of settling matters to best advantage.

UP-COUNTRY LETTERS---NO. 10,

BY RACHEL A. ELY.

A LECTURE TO MOTHERS.

Back to the noise and confusion of the city—to the smoke, dust, smells and fogs that so many hundred endure daily and know it not, never think of the sweet mountain air, gay singing birds and elastic, untrodden grass, for carpets. Poor souls! how my heart aches for such. And another Summer, if my feet stray mountain-ward, I trust my feeble pen-sketches may so arouse the souls within my readers, that they, too, will prefer the pure, mountain air to the stifling atmosphere of the many haunts of pleasure-seekers, where the "society ways" destroy the germ of good that might come to poor, tired humanity, were it allowed. Here let me ask, why the masses so resemble a flock of sheep? If one goes to the seaside or springs, *crowds* go. One has a pin-back skirt, and forthwith dozens appear clad in like manner. Men are less imitative, and yet how many smoke or drink merely *because* others do? and the long or short coats, tight or loose pants, are but evidences of a *soft spot* in their heads, inherited, it may be, from their mothers! How necessary for each to set a good example, knowing the human preference for evil to good—and how especially, so that mothers should, as their example will live to the third or fourth generation. Poor mothers! tired, weary, anxious, overburdened mothers! Everywhere you see them, and yet I would add one more straw to their load, hoping it may break the back, and so free them from the rest—from burdens that are useless and hurtful, and come through ignorance of the true life, and pursuit of happiness for self and family. The greatest burden comes from unselfishness on the part of the mother. Let me explain: She takes the hardest tasks on herself, to save husband and children; all care and responsibility, all dirty, disagreeable work is *her* share, while husband, finding home cares few and wife never fit nor able to go out, takes one of the girls, or a lady friend, or worse still, goes *alone* to lecture, concert or club. The children stoutly decline to help, thinking drudgery is mother's work and company is only for *them*, and their part of the house and themselves must be in better order than the kitchen, and mother; and finally a feeling of disrespect grows up for the dearest friend, their, mother, simply because she can not satisfy their souls and stomachs too! Poor soul, how can she, when her hands are full to overflowing with housework; her head as full of cooking and summer and winter sewing as it can be.

And here is what I want mothers to do: Set the young folks a good example, by *planning* the work, setting the young hands to execute it. Mothers could thus keep themselves fresh and handsome, so that the husband will not be able to find a pleasanter companion nor the young folks a more instructive one, and she can be a companion to not alone her own children, but to the visitors coming to the house, so that no game nor amusement will be complete without Mother and Father take part in it. Mothers, try it. Believe me, it will keep you old folks young, and the young folks steady.

Let your children find you an agreeable companion ever, and ready to sympathize and counsel in their troubles, and you will see them ever ready to give

you their confidence. One of the greatest burdens will be lifted, and home made far happier than if poor, tired MOTHER was drudging her life away that her children might have white bands and begin life ignorant of how to make their homes truly happy and charming.

FAMILIAR TALKS---NO. 2. (New Series.)

BY LUIP.

SOME MORE "MASCULINE SUPREMACY."

I cannot quite agree with all the sentiments expressed in Inglewood's last letter. Towards the close he says he is "seeking a helpmeet in all the departments of our natures; the physical and intellectual; the moral and spiritual. Concerning the last two the supremacy ever rests with the feminine. The former with the masculine." I admit the superiority of the masculine physical strength, but that the husband must be, or is always more intellectual than the wife, I do *not* think. Were it so, the *mutual* counsel and advice would be rather a onesided argument generally. The husband would express his opinions, and act in accordance with them. Why should a man require a greater degree of moral strength in his wife than he himself possesses? I hold that one should be just as moral as the other. How can there be mutual confidence otherwise? Still, I think Grandpa did not attach this meaning to the word *confidence* here. Why should not a man be just as spiritual as his wife? But I am not quite sure I understand just what is meant by the word "spiritual" in its connection with this subject.

After the report of the seeds obtained at the AGRICULTURIST office had been sent, I saw in "Washburn's Cultivator's Guide" a statement to the effect that watermelon seeds should be two years old before being planted. Is there any truth in this?

Mrs. Wood writes of *buff Fleur de Lis*. I have the blue and the white, which is purely white; could not by any stretch of imagination be called buff. But if there is a purely *buff* variety I would like to get some. Will Mrs. W. please inform me where I can procure them?

In the December number of the AGRICULTURIST, a call was made for a report of the *sunwick seed* sent out from that office. We planted seed at two different times, but not a plant put in an appearance. A neighbor was furnished with some of the seed, but makes the same report. Is there any special treatment of the seed necessary? It is a little discouraging to send so many reports of such ill success, but "what can't be cured must be endured."

Boys and Girls.

The Minuet.

BY MRS. MARY MAPES DODGE.

Grandma told me all about it,
Told me so I couldn't doubt it,
How she danced—my grandma danced!
Long ago.
How she held her pretty head,
How her stately skirt she spread,
How she turned her little toes—
Smiling little human rose!—
Long ago.

Grandma's hair was bright and sunny;
Dimpled cheeks, too—oh, how funny!
Really quite a pretty girl,
Long ago.
Bless her! why, she wears a cap,
Grandma does, and takes a nap
Every single day; and yet
Grandma danced the minuet
Long ago.

Now she sits there, rocking, rocking,
Always knitting Grandpa's stocking—
(Every girl was taught to knit,
Long ago.)
Yet her figure is so neat,
And her way so staid and sweet,
I can almost see her now
Bending to her partner's bow,
Long ago.

Grandma says our modern jumping,
Hopping, rushing, whirling, bumping,
Would have shocked the gentle folk
Long ago.
No—they moved with stately grace,
Everything in proper place,
Gliding slowly forward, then
Slowly courtesying back again,
Long ago.

Modern ways are quite alarming,
Grandma says; but boys were charming—
Girls and boys, I mean, of course—
Long ago.
Bravely modest, grandly shy—
What if all of us should try
Just to feel like those who met
In the graceful minuet,
Long ago.

With the minuet in fashion,
Who could fly into a passion?
All would wear the calm they wore
Long ago.
In time to come, if I, perchance,
Should tell my grandchild of our dance,
I shall really like to say,
"We did it, dear, in some such way,
Long ago."

—[St. Nicholas for January.

The Boy That Laughs.

BY GEORGE COOPER.

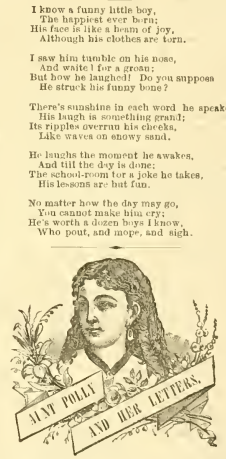
I know a funny little boy,
The happiest ever born;
His face is like a book of joy,
Although his clothes are torn.

I saw him tumble on his nose,
And write! for a groan;
But how he laughed! Do you suppose
He struck his funny bone?

There's sunshine in each word he speaks,
His laugh is something grand;
Its ripples overrun his cheeks,
Like waves on snowy sand.

He laughs the moment he awakes,
And till the day is done;
The school-room for a joke he takes,
His lessons are but fun.

No matter how the day may go,
You cannot make him cry;
He's worth a dozen boys I know,
Who pout, and mope, and sigh.



EBRUARY is Spring, in California, and particularly so this year. The late beautiful rains and warm days, have made the grass and grain spring forth in tender green, covering the valley and distant hills with loveliness. The early-blossoming flowers now grace the garden beds, the sweet violets and most delicate lillies and tube roses fill the air with delicious perfumes. We must expect some cold, windy, cleerless days yet, but really, our Spring is come.

Now, dear Neices and Nephews, plant the little seeds, and set the cuttings of plants, and plant out such flowers and shrubs as you can get, and make a little garden of your own. Papa and Mamma, or your bigger brothers or sisters will assist you, and you can see how the beautiful plants will love to grow from your hands. It is joy to watch the seeds sprout up through the soil and grow into plants, and blossom, or bear fruit.

Aunt Polly will not weary you with a long article this month. We are all glad together, and will try to enjoy this glorious Spring, and make the most of our opportunities.

And now for our letters, several of which are from new contributors:

SAN BENITO, Jan. 28, 1877.

DEAR AUNT POLLY:—I have never written to you, or thought much about it until the January No. came. When I saw your picture, I asked my mother if I might write and tell you that I had no idea that you were so pretty. I thought you were old and wrinkled, and wore a wide cap border and spectacles; and I love you ever so much now, (although I know that we ought to love old ladies too, for we will all get old if we live long enough); But I do not think much of the editor if he looks like that picture. Why, he has the *big head*. He was wise to take his umbrella, for he would need it before this time. Please publish this yourself, so he will not see it. But, mother says she thinks his artist is not so good as yours. Papa has taken the AGRICULTURIST for a short time, and we all like to read it so well that we are going to take it another year, and, I hope, always. I feel so sorry for little Amy, in the Christmas story. How lonely she must have been, so long away from her kind friends! I should have cried myself to death, I believe. I was away to Watsonville two weeks last Summer, and I tell you I was glad to get home again to see my mother and papa and little six-year-old Zena, and darling three-year-old brother, Walter. I am eleven years old, and go to school, and I could tell you a long story about our singing school and concert and Christmas tree; but I am afraid if I make this letter too long that you would not publish it, and I would like to have you do so, for I want to be One of Your Loving Neices,

EMILY W. PAGE.

P. S.—The answer to Fannie B.'s puzzle is, "Bread."

Here is a puzzle, which I have just composed:

My 1 is in ride but not in walk.
My 2 is in tongue, also in talk.
My 3 is in give but not in lend.
My 4 is in sew but not in mend.
My 5 is in river but not in lake.
My 6 is in toad, also in snake.
My 7 is in their but not in hour.
My 8 is in minute but not in hour.
My 9 is in fish but not in trout.
My 10 is in in but not in out.
My 11 is in sing but not in shout.
My whole is a great blessing, for which we should be thankful. E. W. P.

Emily's letter is rather long, but then it is so interesting that we give it all. Write often, Em.

MILPITAS, Jan. 17, 1877.

DEAR AUNT POLLY:—Wishing you a happy new year, I thought I would try and write to the AGRICULTURIST this month. We have been so busy for Christmas and New Years, that I did not have time to write.

The answer to Fannie B.'s puzzle is "Bread." I made out the answers to the others, but was too late in sending them. I received a great many Christmas presents, and I hope Aunt Polly did too. There were too of my puzzles not made out. They appeared in the AGRICULTURIST last June. The answers to them were: "Herring," and "Martha's Vineyard." If you think they are able to get the Premium, my choice would be Romeo and Juliet.

Your Neice, TILLIE.

The chromo has been sent to Tillie, and Aunt Polly hopes she will write again, and send more hard puzzles, that nobody can guess.

SANTA CRUZ, Jan. 29, 1877.

DEAR AUNT POLLY:—I thought I would accept your kind invitation, and write you a letter. I see by your paper that you give chromos to all those who send puzzles that are not answered, and I thought that I would see what I could do. I am thirteen years old. My puzzle is original. Yours Truly,

JACK.

PUZZLE.

I am composed of six letters.
My 4 you will find in will.
My 3 and 6 you will find in every.
My second you will find in cousin.
My fifth you will find in welcome.
My first you will find in Jack.
My whole is the first name of one of our family. JACK.

We think that Jack's puzzle will be a hard one to guess, and we expect he will get a chromo, sure.

SAN FELIPE, Jan. 21, 1877.

DEAR AUNT POLLY:—This is the first time that I have written to you. I am only ten years old, and my sister Jennie is eight years old, and my brother Willie is six years old. I had a nice time Christmas; we had a Christmas tree at our school house. Mamma takes the AGRICULTURIST, and I always read Our Corner, and think it is very nice. We have got a little dog, and we call her Pet.

If you think this worth publishing, I will write again, and try and do better.

Good bye, from Your Neice,

BLANCHE MCLEOD.

Well done, Blanch; hope you will let the cousins hear from you again.

SAN BENITO, Dec. 29, '76.

DEAR AUNT POLLY:—I always like to read Our Corner, so I thought I would try to contribute something. I live in Hernandez valley, on the San Benito river. I will send two puzzles, which I composed:

PUZZLES.

Take B from a city in Europe, and leave what a tired man loves to do.

Take S from a country in Europe, and leave what we all dread.

Take A from a city in California, and leave what we often do.

Take L from a river in the Western States, and leave a fruit.

Take O from a river in the Western States, and leave an herb.

Take A from from an island, and leave a young animal. M. A. S.

WORD PUZZLE.

My first is in tree but not in leaf.
My second is in hay but not in grass.
My third is in ray but not in shine.
My fourth is in new but not in old.
My fifth is in rake but not in mow.
My sixth is in lose but not in find.
My seventh is in go but not in stay.
My eighth is in bird but not in bill.
My ninth is in verb but not in noun.
My tenth is in sit but not in stand.
My eleventh is in near but not in far.
My twelfth is in good but not in bad.
My whole is something we all owe to God. MINNIE A. SHORT.

Minnie has Aunt Polly's thanks for her nice letter and puzzles.

DEAR AUNT POLLY:—I thought I ought to write a letter to you this month. I

have a pretty little pigeon at home. To-morrow a boy is going to give me two more.

With the above letter came a rebus, which Aunt Polly regrets that she cannot give, as she has not the pictures to go with it. The writer forgot to sign a name to the letter, so we don't know who wrote it.

SALINAS VALLEY, Jan., 1877.

DEAR AUNT POLLY:—I wish you many happy returns of the season, as this is the first letter of the new year I have written to you. Our Corner, in December, was splendid. I think the chromo I sent for is splendid. Also the editor's picture, with his umbrella under his arm. I am very sorry to say that I cannot send you a puzzle. There is no sign of rain in Salinas Valley yet. My two sisters and I take music lessons twice a week. If you ever come to Salinas, you will please call and see me. I hope in my next letter I will have better news to tell you, as it may rain, and that will be good news to all. Dear Aunt Polly, I would like to see your photograph. I would like to have it in my album. I will tell you what I got off the Episcopal Church Christmas tree: my sister and I got gold cuff-pins. We attend the Sabbath School there. Aunt Polly, this is enough for this time; the next time I will try to do better. I remain, Your Neice,

ANNIE WILLIAMS.

We thank you for your nice letter. Annie should be satisfied with Aunt Polly's picture in print. Glad you had such a nice Christmas; but do not let the gold pins make you proud, will you?

SAN BENITO, Jan. 17, 1877.

DEAR AUNT POLLY:—I am so glad you sent us your picture. I always wanted to see you, but now I know just how you look. I think your hair is pretty, and you have such bright eyes! No wonder you can tell us country children so many funny things, and you are right in town, where so many folks live, and where so many things are done every day, you can go to the Post Office or to market just when you wish, while we in the country do not have either to go to nearer than four or five miles, and do not go there very often. Oh yes, and the editor's picture, too. We children look at it and are glad to have the chance, but we thought he was a larger man than he looks to be, and he has such a big nose! He must have good judgment, for they say that is a sign. It has begun to rain, and we need not worry any more, but trust in Providence for the future.

You little Neice,

SALLIE MOORE.

Sallie must write again. The editor must certainly feel flattered by such complimentary remarks from the cousins.

A FUNNY DANCE.

A gentleman writing from Graham's Town, Africa, relates his observation of a curious circumstance: "We entered through a locked gate into a large enclosure or paddock, in which were fifty-eight one and two-year-old ostriches. They all looked exceedingly well, and, though they did not dance, seemed full of life. They do, sometimes, favor the spectators with a dance, and it is one of the funniest of all the freaks or habits of animals that evidence a sense of the jokeful we ever beheld. We once saw some twenty nearly full grown birds waltzing together. They began with a sort of sliding, slow revolution on their toes, moving their wings gently up and down, and presently they seemed to get into the spirit of the thing without the aid of any fiddler that we saw, and spun round at a rate that would have astonished any one but a dancing dervish. In dancing they swept round and round, without ever coming into contact with each other."

This story of the ostriches reminds Aunt Polly of a splendid lot of over a hundred young turkeys that she once saw. They were all raised together on a farm where there was nice open ground to parade on. When about full grown, they would often strut around and all form a ring and run around and jump and goobble, gobble, gobble, with as much time and fun and merriment as a troop of school children on a holiday frolic.

THE EDITOR'S REVENGE.

DEAR CHILDREN: Do you suppose for one moment that a gentleman of brains and dignity like *ourself* is going to stand any such scandalous abuse as Aunt Polly and the printers gave us last month? Not a bit of it, while we occupy the sanctum. Now we assure you that we are good looking—in fact, the best looking one in or about the office. We have turned that artist off, without a cent in his pocket, and got another one who will do our bidding.

Aunt Polly is not so handsome as her picture looks, by a good deal. But she has apologized to us for saying we are "old fogy," so we wont retaliate too severely.

Now we will show you just how she looked to us the next day after the paper came out, when she came into the office with a gay bouquet for us, and with a smile that was childlike and bland, she courtesied, with a "Good morning, sir; accept this bouquet."

LOOK AT HER!

As to the printer, who was once a Devil with a tail, like any other pollywog—a printer's "devil," we mean,—he still shows his bringing up in the bogs, among bullrushes and mushrooms. He is a genuine green-back, as green as grass, the biggest toad in the puddle, and a regular croaker at that. We will show you how *he* looked to us, as he came up with a type on his shoulder, offering us "the olive branch of peace." Isn't he a beauty?

OUR SAUCY PRINTER.

Land Monopoly.

Investigation in Order.

At a HONDA GRANGE, San Mateo county has passed the following resolutions, and appointed a committee in accordance therewith:

WHEREAS, The titles to the public lands of this State, known as "lieu or indemnity lands," are in a very disturbed and unsettled condition, and

WHEREAS, A large number of Patrons of Husbandry and other farmers have in good faith become actual settlers upon said lands, and whose titles are now seriously affected by this unsettled condition, therefore be it

Resolved, That a committee of three be appointed by this Grange to investigate this matter and report as soon as possible to this Grange or its Executive Committee some plan or measure by which the evil may be alleviated or corrected.

This committee, says the San Francisco *Bulletin*, certainly has an arduous task before them, one that will require months to carry out, and before they can remedy the matter, they will have to send none but honest men to make the laws, for heretofore all laws bearing upon this subject have either been directly in the interests of land speculators, or so plastered with amendments as to confuse their meaning, and render them capable of almost any construction dishonest men saw fit to put upon them. The Grange is right in one thing, certainly, that a large number of farmers have clouds upon their titles, which would never have been the case had the school grant never been made. The title to the Act is a misnomer, and should have read, "An Act to grant speculators every sixteenth and thirty-sixth section for grazing purposes, and defining the rights of the grantees against the encroachments of the people of the State of California." This is what the grant has amounted to, and it is a pity that the enacting clause and title do not conform more nearly to the Act itself.

The State Land Commissioners have undertaken the arduous task of ascertaining the names of all persons who have been possessing themselves of large quantities of State lands, together with the amount obtained and manner of procuring title. It is probable that the result of that single line of investigation, when made public, will astonish even the San Mateo Grangers. They will find two ex-Surveyor-Generals with a tract of land almost large enough to cover the State of Rhode Island. By consulting the Assessors' books in the various counties they could write a very interesting chapter on unequal taxation. They need not be surprised to find that certain large land monopolists are paying taxes at the rate of $1 per acre on lands which they are now offering and selling at $20 to $30 an acre. They will find in Ventura county 200,000 acres of land in large tracts, paying taxes at the rate of $1.50 an acre, while the land all around and between is assessed at five times that sum. They find in Sacramento a tract of land paying at the rate of $6 an acre, portions of which are now rented at $25 an acre a year, producing from sixty to ninety bushels of corn per acre. If the Grangers, or any other organization or association, can remedy this, they can strike a blow at land monopoly more potent than all the resolutions and laws that Congress can enact. Whenever these large tracts can be made to contribute their just share of taxation towards the support of State, county and General Government, then will they be speedily be put upon the market. The first and most necessary step is to procure County Assessors who are bold enough and honest enough to obey their oath of office and levy taxes on the market value of all land, without fear or favor. When this is accomplished the rest is easy. It is not the farmers alone who are interested in equalizing taxation. Every industry, trade or calling in the country is oppressed.

Of the 600,000 acres of land already listed to the State, a very small portion has been purchased by settlers, except through the land speculators. With honest administration of the affairs of the State Land Office, nearly all would have been sold to settlers in good faith, but through connivance with the land officers speculators have become possessed of the lion's share, through the infamous "lieu pot" system. Surveyor-General Minnis, on finding such a sorry state of affairs, put his foot peremptorily down, and refused to receive any more applications on lands not listed to the State, on the ground that more land had already been applied for than the State is entitled to. In doing this he called down upon his gray head the wrath of all the land-sharks, but his prompt action will have the effect of stopping further wholesale depredations, and reserve the remaining lieu for those applications which are defective. Heretofore no one outside of the land ring had any chance of getting a piece of land unless by the merest accident. These large land-grabbing firms had men with the field surveyors, and the moment the transit disclosed a 16th or 36th section upon which a United States settler had pitched his cabin, or a school section that was worth the taking, they would make a bee-line along the wharves of San Francisco, pick up enough "bummers" for their purpose, who for a mess of porridge and a glass of bad whisky, would sell the birthright which a generous government has granted to every citizen, and at the same time assign it over to the speculator. When the plats came to be filed in the Land Office a diligent search would fail to discover any vacant state lands. As showing how a few men have, by means of dummies and collusion with the State and government offices, obtained possession of thousands of acres of these lands, it may be mentioned that Miller & Lux, the land kings of California, have had patented to them over 200,000 acres of land in Merced, Fresno and Stanislaus counties, in direct violation of the law which provides that no one shall acquire title to more than 320 acres. John Smiths and William Johnson's and George Joneses appear as the applicants in these cases, but the patent books invariably show that Miller & Lux own the land and procured the patents. W. S. Chapman, the enterprising land dealer who in former times controlled one of the local land offices, has acquired title to nearly 10,000 acres in Merced and Fresno counties, through the agency of dummies. And this is only three counties in the State. The title has passed and is vested in these men, and no statute can now deprive them of it. This is independent of the enormous amount of lands located by other means, whereby these men obtained possession of the fairest portions of the great San Joaquin Valley. * * *

Lux & Miller own 600,000 acres in round numbers, and there are hundreds of others equally land burthened. Could these lands be forced to pay taxes on their market value, or what they would bring under the hammer, it would make vast difference in the rate of taxation, while it would compel the sale of millions of acres to settlers at rates that would invite immigration.

Says the San Francisco *Chronicle*: How

does sound for a landed aristocracy? Santa Clara county contains 700,000 acres, of which twenty-seven persons own 260,000; Santa Cruz county contains 320,000 acres, and thirty-one men own 112,000 acres of that; Monterey county contains 2,540,000 acres, of which thirty persons own 746,000 acres; San Luis Obispo county contains 1,500,000 acres, of which sixty-four men have gobbled up 810,000 acres; Santa Barbara county contains 1,500,000 acres, and sixty-seven men own of that 1,216,000 acres; Los Angeles county has 2,060,000 acres, of which seventy persons own 800,000 acres; San Diego has 8,500,000 acres, and fifty-six persons own 600,000 acres. These are only a few sample counties.

There is one question in this land monopoly business that we would like to see agitated. It is this: Have parties who have obtained lands fraudulently, through or in collusion with government agents, a vested right in such lands that cannot be overthrown? Ought they to be allowed to hold peaceable possession of lands so obtained? If the government permits such peculation, does it not offer a premium on rascality, and become the aider and abettor of land thieves and swindlers.—Ed. Agriculturist.

The Wild American Sumac.

Persons who have thought anything about cultivating sumac on this coast, will most likely be interested in what the *Shoe and Leather Reporter* tells us about American sumac:

"The demand for American sumac has increased largely of late years among morocco manufacturers and dyers, and many improvements have been made in its preparation. The quality of the native article has now arrived at great perfection, and mills for grinding have sprung up through the southern and middle States. It has not been a profitable business for the past years, having suffered from the depression incident to all branches of trade.

Sumac grows all over the United States, but that best suited for tanning and dyeing purposes grows spontaneously in a belt of country running from Maryland down through Virginia and the Carolinas, thence through the northern sections of Georgia, Alabama and Mississippi, and in portions of Kentucky and Tennessee. The northern climate seems too cold to develop the tanning properties of this plant, but large quantities of Pennsylvania and New York sumac are sold in the leaf to tanners of goat skins, who put it in the vats to strengthen up and keep the sewed skins from leaking, and it is also used by many tanners who wish to brighten the color of their leather.

The Indian name of sumac is kilikinick; they use it, and it is still used, to mix with tobacco for smoking purposes.

Virginia stands at the head of all the States in producing sumac, and owing to the care taken here in selecting and grinding, its quality is unsurpassed. The towns famous for the sumac trade are Lynchburg, Richmond, Fredericksburg, Alexandria and Winchester.

The season for picking sumac commences with the 1st of July and ends the last of September, or with the first frost, for this turns the leaf red, and then it is worthless. The stems, except the leaf stems, have no strength, and should not be gathered. They are full of pith, and if ground they only absorb the strength of the leaf and depreciate the value of the article. Sumac should be gathered in this way, viz: Break off the parts of the bush containing the leaves, but do not gather the blossoms or berries. Some sumac gatherers allow the leaves to wilt a few hours in the sun, while others convey them immediately into the shade or under cover. Cure it under shelter to preserve its color and strength; when it is dry, put it in bulk, and when dry and windy days set in, spread it out in beds as you would wheat or oats on a clean plank floor. Then thresh it with a flail, when the leaves and stems will break up fine, and rake out the large stems and throw them away. In drying before threshing, it should be frequently thrown over with a pitchfork to let the air get to every part of it. Remember to take out all the sticks, stems and berries. The strength is in the leaf and leaf stems.

The grinders of sumac are obliged to have ample storage room, as they purchase their supply for a year's grinding in the months of July, August and September. Care must be taken to have it thoroughly dry before packing, to avoid spontaneous combustion. Good ventilation should always be secured after it is packed.

Help in Acquiring Knowledge.—In acquiring a knowledge of the English Language, and especially in learning the meaning of words, probably no other work, nor many other books altogether, can afford so much aid as Webster's Unabridged Dictionary, with its 3000 Pictorial Illustrations, its precise and full definitions, its careful discrimination of synonymous words, and its many valuable tables. Let one family have a copy of this work, and use it faithfully, and another be with out it,—the difference in the progress of the two families in getting knowledge will be very great.

☞ No imposition, no humbugging, but fair and honorable dealing, in the undertaking line, can be had a Trueman & Woodrow's. They are not only gentlemen, and old hands at the business, but understand it in all its details, and know how to perform their duties, and can and will give satisfaction in every case. Jot this down in your memory, and it may serve you in time of need. No smoking, drinking, or horse-racing, while attending funerals.

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These lands are located in Santa Barbara County, Cal., near the Lompoc Temperance Colony, and situated for twelve miles on the Santa Ynez River.

Full particulars, contained in the regular Prospectus, will be mailed to all persons addressing the officers of the Company at Lompoc, Santa Barbara County, Cal. JAMES W. WEBB, President.
CHARLES MALTBY, Secretary.

THE INDEPENDENT GREENBACK PARTY

—OF THE—

STATE OF CALIFORNIA.

STATE CENTRAL COMMITTEE.

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S. HARRIS HERRING, Secretary ..... San Jose
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John Cowden ..... Riverside
Alfred Crique ..... San Bernardino
R. R. Lowe ..... Berkeley
Joel Russell ..... Haywood

FORM OF ORGANIZATION.

The National Independent Greenback Party is is composed of Officers for the respective States and Territories and the District of Columbia.

The State Executive Committees are composed of Executive Officers of the Congressional Districts, two at large for each State and Territory and one for each Congressional District.

The County Executive Committees are composed of as many Chairmen as there may be Clubs in the respective Counties, appointed and commissioned by their County Executive, subject to the approval of the District Executive.

The Executive Officer for each State, respectively, is Chairman of the State Executive Committee.

The Executive Officer for each District respectively, is Chairman of the District Executive Committee.

The Executive Officer for each County, is Chairman of the County Committee.

Each Club is organized under the form of the Independent Party.

TEMPORARY PLATFORM.

Whereas, The industries of our country are prostrated by a false financial system which has not only deprived labor of its just reward, but has read recklessly into idleness honorable to secure work, driving them to criminality or starvation, and fostered general dishonesty in official places and financial mismanagement of all our public interests, and

Whereas The Republican and Democratic parties have utterly failed to afford any remedy and are now both pledged to the interests of the National Banks and gold speculators, who consuming class is the surplus product of industry and are using it to subvert republican institutions and centralize the powers of Government in the hands of a money oligarchy, therefore

Resolved, That the following declaration of Principles and Rights be demanded:

1st—The immediate and unconditional repeal of the Specie Resumption Act, of January 14th, 1875, (and all other acts having a tendency to increase our National debt or decrease our free currency,) and that the issue of our National Notes from the ruin resulting from its enforcement.

2nd—We recommend thorough and complete organization with the view of electing Representatives to Congress who will legislate for, and a President who will carry out the wishes of the people in this regard.

3d—We demand the issue of Legal Tender Notes by the Government receivable for all purposes, instead of the Bank Notes, and the whole circulation restored to the Government, where it belongs.

4th—That the Government has no right to issue any money which is not a full legal tender for all purposes, and that any attempt to depreciate the Government currency should be considered treasonable.

5th—It is the paramount duty of the Government in all its legislation to keep in view the full development of all legitimate business, agricultural, mining, manufacturing, commercial and public improvements.

6th—We hereby protest against any further issue of gold bonds for sales in foreign markets, by means of which we would be made for a long time to the powers of wood and drawers of water for foreign nations, and we further protest against the sale of Government bonds for the purpose of buying silver to be used as a substitute for our more convenient and less fluctuating fractional currency, which, although well calculated to enrich the owners of silver mines, yet in operation will still further oppress through taxation an already overburdened people.

7th—That the Government has no right to dispose of the public lands except to actual settlers and then only in limited quantities.

8th—A general law should be enacted exempting from all debt and from compulsory sale a uniform and sufficient homestead, to be exempt and inalienable forever and proportioned to the number and condition of those possibly dependent on it for support.

9th—That every American citizen of proper age without regard to sex should be allowed the full right of franchise.

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—AND—

GENERAL AUCTIONEERS.

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HAVE FOR SALE, IN SANTA CLARA AND adjoining Counties, a very fine list of Grain and Stock Farms, improved and unimproved, in in tracts from 10 acres to 10,000, which they offer upon easy terms and at low prices; also, a large list of Business and Residence property in Santa Clara and San Jose. We append a partial list Having resided in this county for 26 years, and being thoroughly posted as regards Real Estate Values, we respectfully solicit all in search of Homes, Stock, or business of any kind to give us a call.

10 Acres near the town of Santa Clara, with fine House and Out-buildings, good Orchard, Ornamental Trees, etc. Price, $10,000.

20 Acres of Unimproved Land in the Willows, being part of the Lupton Estate. Price $3,000.

80 Acres, under fence, all in cultivation; has a House of 4 rooms, Barn and Stable-room for 15 horses, good Well, splendid water. Also, 52 acres adjoining, with Redwood House, Barn, etc., good Well; all under cultivation. Price, $35 per acre.

21 Acres of fine land, 3 miles from San Jose, east of Coyote, well enclosed, good Adobe House. Large Barn. etc. Price, $4,000.

38 Acres of fine land, 2 miles south of San Jose, lying between the Monterey Road and the Coyote Creek. The soil is unsurpassed, and the location beautiful Will be sold as a whole, or in three subdivisions; 22 acres fronting on Coyote, at $225 per acre; 8 acres between the two residence lots, at $300 per acre; 16 acres including the fine improvements for $5,000.

60 Acres of as fine land as can be found in the county, with fine improvement. Will sell low if called for within next 90 days; must be sold in that time. Situate one mile from Lawrence Station, S. P. R. R.

18 Acres fine Vegetable Land, 3 miles southeast of San Jose, on east side of Fully Road; has a Dwelling of 6 rooms (two-story house); Barn, etc.; Orchard and Vineyard of 5 acres; Cows, Wagons, Farming Implements, etc. Price of whole, $4,500.

1,000 Acres of fine Grain and Fruit Land, located near Los Gatos; will be sold in tracts to suit at from 40 to 1000 acres. Terms easy: prices low: must be sold within 90 days.

76 Acres rolling land 8 miles west of San Jose, adjoining Reynolds' farm Small house of 5 rooms; never-running stream of water; well fenced; with plenty of wood on the premises. Price, $2,800.

108 Acres land on San Jose and Santa Cruz road, near Los Gatos, 5 miles from San Jose; excellent land, and will produce anything; improvements consist of a dwelling which cost $3,000, a good barn, also orchard and vineyard; good well, wind mill and large tank. Terms, ½ cash; balance on time. Price, $35 per acre.

88 Acres fine land 6 miles west of San Jose, near Lawrence Station; well improved. Price, $100 per acre, on reasonable terms.

290 Acres 5 miles west of Gilroy; 30 acres vineyard; 10 acres orchard, all kinds of fruits; 3 living streams of water; all under fence; has a good house, barn and other out buildings; wine cellars. Terms easy. Price, $10,000.

Stock farm of 2,000 acres, enclosed with brush fence and natural boundaries, located about 10 miles east of the 18-mile house, near Bennett's stock farm; well improved; has a good dwelling, barn, corrals, etc ; 80 head of American cattle, 45 of which are cows; balance cattle and two year olds. Terms easy. Price, $3,000.

42 31-100 Acres land on the road Guadalupe Mines, near the Los Gatos road, adjoining lands of F. Richmond. Terms easy. Price, $3,000.

242 Acres fine land, near San Jose; will be sold on a long credit. $4,000 cash; balance in 6 years, equal annual payments, with interest at 10 per cent per annum.

200 Acres of excellent fruit and berry land near Santa Clara depot. Price per acre, $200.

200 Acres in Alameda county, on west side of county road leading to Oakland, about one mile from Warm Springs, near Mission San Jose. It is fine black loam soil, well fenced. Has a good house and barn, etc. Price, $90 per acre; one-fourth cash; balance in one, two and three years, approved paper bearing one per cent. interest.

500 Acres of extra fine grain land 5 miles southwest of Watsonville and 1½ miles from shipping point, will yield 40 to 60 bushels per acre. Terms to suit purchasers. Price, $50 per acre.

160 Acres of pre-emption claim 35 miles southwest of Salinas City, 10 miles west of railroad terminus. Small house, good fence, out-houses, etc.; with an outside range of 800 acres, all finely watered. This is one of the finest hay ranches to be found in the country. Price, $1600; or will exchange for San Jose property.

160 Acres of fine timbered land located just on the line between Santa Clara and Santa Cruz counties. No piece of property on Santa Cruz mountains to excel it. Price, $5,000.

120 Acres fine land adjoining village of Saratoga; enclosed; title perfect Price per acre, $50. Also, a farm of 160 acres 1½ miles south of Saratoga; good dwelling, barn, orchard and vineyard. Price, $4000.

81-Acre farm 4 miles northeast of San Jose; is a choice piece of land, with house 18x24 feet, small barn, etc. Price, $7,000.

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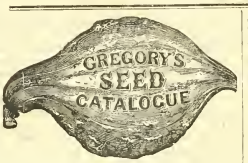

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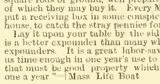

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